# THE MINING LOUENA TVIHINGE THUS

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The MINING JOURNAL is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.]

No. 2560.-Vol. LIV.

ALS.

LONDON, SATURDAY, SEPTEMBER 13, 1884.

SUPPLEMENT. SIXPENCE. SIXPENCE. BY POST, £1 4s. PER ANNUM.

TR. JAMES H. CROFTS, STOCK AND SHARE DEALER, No. 1, FINCH LANE, CORNHILL, LONDON, E.C. ESTABLISHED 1842.

BUSINESS transacted in all descriptions of MINING STOCKS and HARES (British and Foreign), Consols, Banks, Bonds (Foreign and Colo-pial), Railways, Insurance, Assurance, Telegraph, Transway, Shipping, Canal, Gas, Water, and Dock Shares, and all Miscellaneous Shares, BUSINESS negotiated in STOCKS and SHARES not having a general

Every Friday a GENERAL and RELIABLE LIST issued (a copy of which will be forwarded on application), containing closing prices of the week.

ille forwarded on application), containing closing prices of the week.
Mixes Inspected.
ARKERS: CHTY BANK, London—SOUTH CORNWALL BANK, St. Austell.
TELEPHONE NUMBER 1003.

### TELEPHONE NUMBER 1003.

#### SPECIAL DEALINGS in the following (or part):

### Axia Minor, 3s. 6d.

### Bax Minor

\*.\* BUSINESS at CLOSE PRICES in all Market TIN, COPPER, LEAD, COLD, SILVER, and DIAMOND SHARES JAMES H. OROPTS, 1, PINCH LANE, LONDON.

PAILWAYS - SPECIAL BUSINESS .- Fortnightly Accounts opened on receipt of the usual cover.

JAMES H. CROFTS, 1, FINCH LANE, LONDON. OREIGN BONDS - SPECIAL BUSINESS. - Fortnightly

nts opened on receipt of the usual cover.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

MERICAN AND CANADIAN STOCKS AND SHARES—
SPECIAL BUSINESS.
ortnightly Accounts opened on receipt of the usual cover. AMES H. CROFTS, 1, FINCH LANE, LONDON.

OPTIONS in all STOCKS and SHARES dealt in.-

TOLD AND SILVER MINES.—SPECIAL BUSINESS in ALL Warketable INDIAN GOLD SHARES, and in Colombian Hydraulic, billfornis, Calino "Bis," Gold Coast, Guinea Gold Coast, Kongsberg, New Allso, Oscar, West Calino, Tollma A. Tollma B. La Piata, Rio Tinto, Froninc and Bolivia, Potosi, Chile, Nouveau Monde, Ruby, Richmond, Victoris. \*\* SHARES IN THE ABOVE SOLD FOR FORWARD DELIVERY ONE WO, OR THERE MONTHS ON DEPOSIT OF TWENTY PER CENT. JAMES H. CROPTS, 1, PINCH LANE, LONDON.

ISCELLANBOUS SHARES of all DESCRIPTIONS BOUGHT or SOLD—SPECIAL BUSINESS;—Brighton Aquarium, General Oredit, Indoor's Bay, Native Guano, Sues Canal, Westminster Aquarium, and Hotel

SHARRS SOLD for FORWARD DELIVERY, ONE, TWO, OF THREE MONTHS, On DE ONE of Twenty Per Cent.

JAMES H. CROPTS, 1, PINCH LANE, LONDON.

TRANSVAAL GOLD AND SOUTH AFRICAN DIAMOND PIELDS. SPECIAL BUSINESS in all Transvaal Shares, including LISBON-BRLYN, TRANSVAAL, SPITZ KOP, SCHWAB'S GULLY, KIMBERLEY ORTH BLOCK, and KIMBERLEY CENTRAL, \* SHARES IN THE ABOVE SOLD FOR FORWARD DELIVERY ON DEPOSIT OF TWENTY PER CENT.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

ESTABLISHED 1842.

MR. WILLIAM H. BUMPUS, STOCK BROKER
AND MINING SHARE DEALER,
44, THREADNEEDLE STREET, LONDON, E.C.
[Estab!ished at this Address in 1867.]

BUSINESS transacted in ALL STOCK EXCHANGE SECURITIES, MINING and MISCELLANEOUS SHARES of every description. An INVESTMENT LIST free on application.

An INVESTMENT LIST free on application.

| SPECIAL BUBINESS in the undermentioned:—
| 100 Airankoo, 8s. 9d. |
| 100 Carra Camborne. |
| 100 Caliso Bis, 9s. 6d. |
| 100 Devon Friend., 2s. 9d. |
| 100 Devon Bis, 8s. 6d. |
| 100 Devon Friend., 2s. 9d. |
| 100 Devon Bis, 8s. 6d. |
| 100 Devon Triend., 2s. 9d. |
| 100 Devon Bis, 8s. 6d. |
| 100 Devon Triend., 2s. 9d. |
| 100 Devon Triend., 2s. 9d. |
| 100 Devon Triend., 2s. 9d. |
| 100 Devon Bis, 8s. 6d. |
| 100 Devon Triend., 2s. 9d. |
| 100 Devon Bis, 8s. 6d. |
| 100 Devon Triend., 2s. 9d. |
| 100 Devon Triend., 2s. 9d. |
| 100 Devon Triend., 2s. 9d. |
| 100 Devon Bis, 8s. 6d. |
| 100 Devon Triend., 2s. 9d. |
| 101 Devon Consols, 8d. |
| 102 Devon Consols, 8d. |
| 103 Devon Consols, 8d. |
| 104 Devon Consols, 8d. |
| 105 Devon Consols, 8d. |
| 106 Devon Consols, 8d. |
| 107 Devon Consols, 8d. |
| 108 Devo

Where prices are not inserted offers may be made.

"The present is a most favourable opportunity for investing in SOUND INING SECURITIES, a judicious purchase of which at the low prices now uling will, in all probability, result in large profits within the next few months.

Mr. BUMPUS devotes SPECIAL ATTENTION to LEGITIMATE MINES, and is in a position to afford reliable information and advice to intending prestors and others in the selection of Shares either for INVESTMENT or PECULATION. Correspondence invited.

ENTARLIBHED 1997

ESTABLISHED 1807.

BRITISH AND FOREIGN MINING OFFICES.

MESSES. PETER WATSON AND CO., 18, AUSTIN FRIARS, OLD BROAD STREET, LONDON, E.C. BANKERS: THE ALLIANCE BANK (Limited).

MESSES. PETER WATSON AND CO.'S
BRITISH AND FOREIGN MONTHLY MINING NEWS-STOCK
AND SHARE INVESTMENT NOTES—MINES, MINERALS, AND
METAL MARKETS—SHARE LIST, NO. 855, VOL. XVII., for SEPTEMBER
month, is ready, and will be sent to customers on application.

Annual Subscription...... 5s. | Single Copy ...

R. ALFRED E. COOKE, BRITISH AND FOREIGN STOCK AND SHARE DEALER, 9, OLD BROAD STREET, LONDON. ESTABLISHED 1853.

(Opposite the Stock Exchange, with which his offices are in DIRECT TELEGRAPHIC COMMUNICATION.)

Mr. ALFRED E. COOKE can SELL the following shares, or any smaller market ble number at prices affixed FREE of COMMISSION:—

30 Eper Lovell. 10 Fast Lovell. 30 Fast Molal Ror 15 Ecton, 20s. 20 Flagstaff. 30 Frongoch, 9s.

Mr. Alfred E. Cooke can SELL the following share able number at prices affixed FREE of COMMISSION:

30 Almada, 4s. 2d.
10 Balkis, 2s. 3d.
20 Bedford United, 32s 6
10 Brataberg, 27s. 5d.
10 Canko Bis, 8s. 9d.
40 Chile Gold, 3s.
50 Colano Bis, 8s. 9d.
40 Chile Gold, 3s.
50 Colono Bis, 8s. 9d.
40 Chile Gold, 3s.
50 Colono Bis, 8s. 9d.
40 Chile Gold, 3s.
50 Colono Bis, 8s. 9d.
40 Chontales, 4s. 3d.
4s. 4d.
4s es, or any smaller marketi:10 Rio Tinto.
30 Ruby, 18s. 9d.
50 Rhodes Reef.
10 Richmond, £3½.
10 Roman Gravels, £3½.
5 Schwab's Gully, £6½.
20 South Darren, 4s. 9d.
20 South Darren, 4s. 9d.
20 South Darren, 4s. 9d.
21 Tansval Gold, 20s. 9
50 Treavean, 5s. 6d.,
15 Trevannance, 3 s.
10 U. Mexican, £3 16s., 3d
50 Victoria Gold.
5 Wheal Basset, £2½.
20 West Callao, 3s. 6d.
10 West Caradon, 2s.
4) West Orebor, 2s.
4) West Orebor, 2s.
4) West Crebor, 2s.
5) West Crebor, 2s.
5) West Crebor, 2s.
6) Wheal Coates, 2s. 6d.
10 Wheal Crebor, 27s.
20 Wheal Kitty, 12s. 9d.
SOLD FOR FORWARD

30 Eberhardt, 4s. 9d. 40 Orlta, 2s. 6d. 100 West Caradon, 2s. 41 West Crebor, 2s. 110 East Lovell. 20 Oscar, 17s. 75 West Polbreen, 10s. 20 East Wheal Rose, 2s. 6 25 Oscar, fully paid. 10 West Kitty, £10½. 50 Portos), 8s. 3d. 100 West Kitty, £10½. 100 Parsy Copper, 1s. 100 Parsy Copper

Mr. Cooks has correspondents in every important city and town in England, thereby he can deal in Local Shares of every description.

Daily and Weekly Lists of Prices issued to clients on application.

ADVANCES MADE ON STOCKS AND SHARES. Letters and Telegrams receive immediate personal attention, BANKERS: ROYAL EXCHANGE (Limited), Cornhill, London.

MR. JAMES STOCKER, STOCKBROKER, 2, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C.

A ready Market for Buyers or Sellers of Shares in British Mines; also Foreign fold and Silver; and Miscellaneous Stocks and Shares, British and Foreign unds, Railway Stocks, &c., for cash or account.

BANKERS: LONDON AND WESTMINSTER, Lothbury, E.C. ESTABLISHED 35 YEARS.

STOCKS AND SHARES.

JOHN LENN AND CO.'S CIRCULAR, POST FREE, contains Highest, Lowest, Latest Prices of all Stocks and Shares, also shows the return per cent. at a glance. JOHN LENN AND CO.'S CIRCULAR, POST FREE.

The advice given in their former Circulars has enable investors to make from 50 to 150 per cent. in a week.

JOHN
LENN AND CO.'S CIRCULAR, POST FREE, contains special information respecting the safest investments obtainable, paying from 5 to 12½ per cent.

LENN AND CO. (LIMITED), STOCK AND SHARE DEALERS, 4 AND 5, GROCERS' HALL COURT, LONDON, E.C.

MB. E. J. BARTLETT, STOCK AND SHARE DEALER, 30, GREAT ST. HELENS, LONDON, E.C. Selected List of Investments post free on application

MESSRS. ENDEAN AND CO., STOCK AND SHARE DEALERS, S5, GRACECHURCH STREET, LONDON, E.C.

ESTABLISHED 1862.
BANKERS: LONDON AND WESTMINSTER, Lothbury, E.C.

JOHN B. REYNOLDS, STOCK AND SHARE DEALER,
WALBROOK, LONDON, E.C.
Established Twenty-five Years. BANKERS: LONDON JOINT-STOOK.

WEST KITTY, TREVAUNANCE, AND NEW KITTY.

WEST KITTY, TREVAURANCE, AND NEW KITTY.

For prospect of trade, tin markets, management of mines, rich districts, &c., see verbatim reports of meetings of these companies, recently held, supplied gratis on application to Mr. Reynolds.

300 per cent, per annum on capital as the result of investments recommended by Mr. Reynolds, and other particulars. See Mr. Reynolds's "Facts and Figures, also supplied gratis on application to him.

The present is a very opportune moment for the investment of money in securities of all descriptions.

Mr. Reynolds is a buyer of any part of 1600 Polberro shares at 30s each, and is a seller of a limited number to any of his outcomers at 35s. each. Dealers are offering 2s, per share for the option of buying Polberros in two years hence at

offering 2s, per soarce for the opposite of Wheal Coates shares. Correspondents will kindly state number and lowest price for cash.

Mr. Reynolds transacts business with promptitude at net prices for cash only POLBERRO, ST. AGNES.

POLBERRO, ST. AGNES.

The shares of this mine are in favour, and will advance probably to a very high figure. The mine has been impected by gentlemen who are well known, and whose opinions are universally respected. Mr. REYNOLDS will be happy to furnish the particulars of their resport, and to give to his correspondents any information in his power. The books of the company and all other particulars are open for inspection at the company's offices. The management is the same as that of West Kitty, and the property promises to be of a very high order. Mr. REYNOLDS directs attention to the fact that those who have purchased the shares can already obtain a fair profit. Mr. REYNOLDS further directs attention to the fact to introduce West Kitty, under very similar circumstances to those which now characterise Polberro, St. Agnes, and Mr. REYNOLDS with equal confidence recommends the latter company's shares. West Kitty, with at "resent 12s, per share paid, returns 20s, per share paranum as a minimum dividend with every prospect of further increase. When West Kitty shares had only 2s, per share paid, returns 20s, per share paid, returns 20s, per share per annum as a minimum dividend with every prospect of further increase.

CARN CAMBORNE, AND ADVERTISED PRICES .-

FOR SALE, FOR CASH, FIVE HUNDRED CARN CAMBORNE Shares, &1 fully paid, at 9s. 3d., in lots of not less than 100 Shares.

SAMUEL JAMES, STOCK BROKER AND MINING SHARE DEALER, 14, ANGEL COURT, E.C.

RERDINAND R. KIRK, STOCKBROKER 5, BIRCHIN LANE, LONDON, E.C.

SPECIAL BUSINESS in the following :-

60 Almada. 50 Balkis. 80 Bratsberg. 100 Callac Bis. 60 Cartago. 150 Chontales.

20 East Wheal Rose. 60 Eberhardt. 156 Kapanga. 50 Kongsberg. 60 Mysore Gold. 70 New Callao. 70 Organos, 90 Orita, 80 Prince of Wales, 60 Victoria, 80 West Callao, 40 Wheal Crebor, Fortnightly accounts opened in Home Railways, Foreign Bonds, American and Canadian Railways, on receipt of the usual cover.

C H A R L E S T H O M A S, MINING AGENT AND ENGINEER, 3, GREAT ST. HELEN'S, LONDON, E.C.

M B. A L F B E D T H O M A MINING ENGINEER, AND STOCK AND SHARE DEALER, 10, COLEMAN STREET, LONDON E.C.

ESTABLISHED 1852. M. HENRY J. TALLENTIRE, STOCK BROKER AND MINING SHARE DEALER.

SPECIAL BUSINESS in all Home and Foreign Mines at close prices.
SEPTEMBER OIRCULAR on application, containing valuable information and advice to Investors, post free.
SHARES SOLD for forward delivery in one to three months upon usual lengalt.

OFFICES-21, THREADNEEDLE STREET, LONDON, E.C. BANKERS: CITY BANK, Threadneedle-street, E.C..

M. R. J. G. R. A. N. T. M. A. C. L. E. A. N. SHAREBROKER AND IRONBROKER, STIRLING, N.B.,
Refers to his Share Market Report on page 1965 of to-day's Journal.

R. W. B. COBB, 29, BISHOPSGATE STREET WITHIN,
Special information and business in all mines in the United States of Colombia.—Tolims, Western Andes, Colombian, and other gold and silver mines in
that country.

In direct communication each mail with the highest mining authority in
Colombia, through whose private advices I am able to give most valuable information as to mines in the Tolima district, and other mines in the country.

MESSRS, PENNINGTON AND CO., SWORN BROKERS AND SHARE DEALERS, 13, MOORGATE STREET, LONDON, E.C. BUSINESS in all DESCRIPTIONS OF STOOKS, MINING and other SHARES. ESTABLISHED 1869—BANKERS: ALLIANCE (Limited).

MR. W. TREGELLAS, 40, BISHOPSGATE STREET
WITHIN, E.C.,
Deals in all descriptions of STOCKS and SHARES at close market prices.

RISLEY, STOCK AND SHARE BROKER, AND MINING SHARE DEALER, 38, CORNHILL, LONDON, E.C. ESTABLISHED 1860.

BANKERS: LONDON and WESTMINSTER, Lothbury, E.C.

PROFITABLE INVESTMENTS.

TRUST MORTGAGE AND INVESTMENT COMPANIES
PAYING FROM FIVE TO TEN PER CENT.
Further fall in the value of money. Reduction in the Bank rate. Reduction in the rates allowed on deposits.

FROM ABBOTT, PAGE, AND CO.'S SPECIAL ISSUE.
STOCKBROKERS,
42, POULTRY, LONDON, E.O.
Complete Copy, with Monthly (September) Circular, sent post free on
application.

COLLIERY, MINING, and OTHER ENGINEERS wanting articles in STEEL to RESIST GREAT WEAR AND TEAR, combining lightness and strength, avoid stoppages, breakdowns, &c., see page 1085.

ESTABLISHED 1866.—THIRTEEN YEARS IN CORNWALL SAMUEL JAMES, STOCK BROKER AND MINING SHARE DEALER, 14, ANGEL COURT, LONDON, E.C. Member of the Redruth Mining Exchange.

Those who wish to buy or sell any mining shares should consult Mr. James.
Mr. J. devotes his entire attention to home and foreign mines, and places his special information at the disposal of his clients. That mining offers undoubted advantages for quick returns no one can deny. Look at the enormous sums of money paid in dividends by home and foreign mines. A large number of wealthy families owe their present proud positions to adventuring in LEGHTI-MATE MINES. With a better price for metals many of the smaller priced shares would immediately advance some hundreds per cent. POLBERRO SHARES SHOULD BE BOUGHT AT ONCE.

There are many mines worth attention, as proceedings of recent share-holders meetings prove beyond doubt. During the last 40 years there has no such opportunity presented itself as the present for investment in British mines. Metals are certain to advance. In well-informed circles no doubt is entertained on this point. Buyers must not further delay orders. See Selected List published by S. James, 14, Angel-court, London, E.C.

See Selected List published by S. James, 19, Angel-court, London, E.C.

SPECIAL BUSINESS in the following or part:—
25 Bedford United, 31834 50 South Oaradon, 13s 9d
100 Carn Camborne, 9a. 3d. 10 South Oaradon, 13s 9d
100 Clacombe Cons, 636d
100 Delacombe Cons, 636d
100 Delacombe Cons, 636d
100 Devon United, 5s. 3d. 10 South Frances, 27. 3d. 10 Good Hills, 5s. 51 Indian Consol., 7s. 100 Delacoth, 273. 50 Derived United, 5s. 6d. 20 Devon United, 5s. 20 Devon United, 5s. 20 Devon United, 5s. 2

SEPT

bly with

with the Und where

ese. The tional strength of the Intionaliti

heir opera

by societic 1,000,000. The rep at Southp mentary s he whole ne indi and from of Code u

ducation mly exter

of the wi uring th

1644 (gir

that geog

he fourt

The Artee should moting t

portant of Much un publicat influence

lege life

numerou

ecurs in

40 years

to show applied shows th

also by rule, a i table al line bet

of the g

possessi total n

#### BRITISH ASSOCIATION FOR ADVANCEMENT OF SCIENCE.

THE MONTREAL MEETING.

BIOLOGY SECTION

The reports of the several committees in this section contained, as The reports of the several committees in this section contained, as usual, a vast amount of valuable information. At the Southport meeting Dr. Carson read a short account of the crania (now in the British Museum) brought from Larat by Mr. Forbes, which has been published in extenso in the Journal of the Anthropological Institute, and which concludes with regard to the relation of the inhabitants of Timor Laut to those of adjacent countries:—"That the skulls just described are not those of a pure race is very evident. Two very distinct types can be made out—the brachycephalic and the colichocephalic, the former greatly predominating in number. Both from the information Mr. Forbes has given us as to their appearance, and from the skulls themselves, there is no difficulty in recognising a strong Malay element in the population. The male skull No. 4, and and from the skulls themselves, there is no difficulty in recognising a strong Malay element in the population. The male skull No. 4, and the female No. 6, are typically Malayan in their characters, especially in possessing large, open, rounded orbits, and smooth forehead, the superciliary ridges and glabella being almost entirely absent. The other brachycephalic skulls, though not presenting such a striking affinity, agree more or less with this type, but give evidence of mixed characters. The dolichocephalic skull is, on the other hand, markedly of the Papuan type, and corresponds so closely as to be undistinguishable from two crania obtained 20 miles inland from Port Moresby, New Guinea, in the College of Surgeons' Museum, also from another from the Solomon Islands. Along with this form of another from the Solomon Islands. Along with this form of skull, Mr. Forbes informs me, is associated frizzly hair and dark skin. The examination of the cranial characters of the inhabitants of Timor Laut, as illustrated by the skulls before us, shows that the peopling of this island is no exception to what is usually found in the various groups of islands in the Polynesian Archipelago. From its close proximity to New Guinea, perhaps more of the Papuan element might have been expected."

The general report of the Committee on the Migration of Birds

comprises observations taken at lighthouses and light-vessels, as well as at several land stations, on the east coast of England, the east and west coasts of Scotland, the coasts of Ireland, also the Channel Orkney and Shetland Isles, the Hebrides, Faroes, Ic and Heligoland, and one Baltic station on the coast of Zealand, for which the committee is again indebted to Professor Lütken, of Copenhagen. Altogether 158 stations have been supplied with schedules and letters of instructions for registering observations, and returns have been received from 102. The observations taken on the east coast of Great Britain in 1883 have been such as generally to confirm the conclusions arrived at in former reports, having reference the direction of significant states o returns have been received from 102. to direction of flight and lines of migration. The winter of 1883-4 has been exceptionally mild, and there has been an almost entire ab sence of severe frosts and lasting snowstorms. The prevailing winds in the autumn, west and south-west, such as observation shows, are most favourable for migrants crossing the North Sea, and continuing their journey inland. Winds from opposite quarters to these tire out the birds, and cause them to drop directly they reach land. In Ireland the number of migrants in the autumn seems to have been more than usual. A great rush of thrushes (including probably redwings), blackbirds, and starlings took place at the south-eastern and southern stations between Oct. 25 and Nov. 2—dates which agree with the great rush on the east coast of England. The bulk of the immigrants appear to arrive on the south-eastern coast of Ireland, excepting such birds as the bernicle goose and snow bunting, which excepting such birds as the bernicle goose and show bunting, which are mainly recorded from north-western stations, and rarely entered in schedules from the east or south coast. An interesting feature this year is the occurrence of several examples of the Greenland falcon on the west coast, no less than eight having been shot at various points from Donegal to Cork and one Iceland falcon at Westport. Of the enormous immigration which crosses our east coast in the autumn, either to winter in these islands or merely on passage across them, a small proportion only appear to return by the same routes. What is called the "first flight" of the woodcock arrived on the Yorkshire, Lincolnshire, and Norfolk coasts on the night of Oct. 21. The "great flight" or rush, which covered the whole of the east coast from the Farne islands to Yarmouth was on the nights of the 28th and 29th. These two periods correlate with the principal flights of woodcock across Heligoland. But few woodcock were recorded from stations on the east coast of Scotland, although at the Bell Rock lighthouse, on the night from Oct. 31 to Nov. 1, Mr. Jack reports an enormous rush of various species, commencing at 7 r.m. and the species of th ecies, commencing at 7 P.M. Immense numbers were killed pitch g into the sea. Mr. Harvie-Brown records a very great spring gether there has been a very marked absence on our British coasts of rare and casual visitants. It is well known that large numbers of European birds, presumably driven out of their course, are seen European birds, presumably driven out or their course, are seen during the autumn migration far out over the Atlantic, alighting on the ocean-going steamers. It is proposed by Mr. Harvie-Brown to supply schedules to the principal lines of oceam steam vessels for the better recording of these occurrences. It must be borne in mind that the immense and constantly-increasing traffic, which in these days bridges the Atlantic, and unites the Old and New Worlds, offers unusual chances for birds to break their flight, and ultimately, perhaps to reach the American coast.

haps, to reach the American coast.

The characteristic feature of North American flora were discuss in a paper by Dr. ASA GRAY, the great American botanist, of Harvard University; and Prof. LAWSON, of Dalhousie College, Halifax, N.S., In a paper by Dr. Asa Usar, the great Albertal College, Halifax, N.S., mentioned many British plants that were indigenous to America. There were interesting papers in this section "On Recent Groups of Echinoderms," by Prof. Marshall, and "On the Distribution of Minerals," by Dr. G. Dobson. In this he pointed out the remarkable resemblance between certain bats of the Australian and Ethiopean regions. From this it was apparent that some communication once existed between those continents. There probably had been a chain of islands between Australasia and Africa, which had existed for a short period, by which route the bat had passed from one place to another. Bats were widely spread in Madagascar, Mauritius, and Australia, but there is only one species in India which shows a strong resemblance to the Madagascar bats. So it is evident that at no distant day they had common ancestors. It was, therefore, deduced that there must have been a chain of islands from Australia to Mada gascar, and at a later period from Madagascar to India. On close examination he felt convinced that the Indian Ocean contained many submerged banks between Australia, Madagascar, and India.

GEOGRAPHY SECTION A general description of the territory under the government of the British North Borneo Company, from personal observations made during a residence of nearly three years, and from the official report of Messrs. Pryer, Von Donop, Frank Hatton, and Witti, was given in a paper by Mr. E. P. Guerritz, who said that the territory lies between the 116th and 119th degrees of east longitude and the fourth and seventh parallels of north latitude, embracing an area of some 20,000 square miles, and a coast line of about 500 miles. A range of mountains, the general direction of which is north-east A range of mountains, the general direction of which is north-east and south-west, forms a backbone through the heart of the country. Melaio attains an approximate height of 4000 ft., Mentapok, 7000 ft.; Trodan, 8000 ft.; and Kina Balu, 13,698 ft. From this range, and descending to the coast on either side, are lesser ranges of hills, covered for the most part with virgin forest, and interspersed with fertile plains watered by numerous rivers. The coast, as a rule, is low and flat. It is, to a large extent, lined with the cascarina tree, broken by stretches of mangrove, and diversified by low sandstone cliffs or patches of forest reaching to the water's edge. The country is rich in haphours, the most important being Gays. Amboog. country is rich in harbours, the most important being Gaya, Ambong, and Usikan on the west coast, Kudat on the north, and Sandakan on the east. The principal rivers are the Kimanis, Papar, Putatan, Abai, and Tsmpasak on the west coast, Paltan and Sugut on the north, and Sibuco and Kinabatangan on the cast. Most of these are navigable for steam launches of light draught, but the entrances are more or less barred. The products of the country include to-bacco, sugar, gambier (the inspissated juice of the Uncaria gambir), pepper, tea, coffee, sago, gutta-percha, and camphor. The author describes the Gomanton caves on the east coast, from which are obtained edible birds' nests to the annual value of \$25,000, and which ontain an apparently inexhaustible store of guano, deposited both y birds and bats. The coal at present in use is procured from the luara mines at the mouth of the Brunei river, but boring for workable deposits is being carried on within the territory of the company. Traces of gold have been found, and samples of silver, cinnabar, antimony and tin. Mother-of-pearl, beche-de-mer, and tortoise-shell, are also obtainable. The climate is said to be fairly healthy. The maximum monthly mean temperature during 1883 was 89.3, and the minimum 75.1. The rainfall at Kudat for the year was 89'3, and the minimum 75'1. The rainfall at was 120'56. November, December, and Januar months. The population is estimated at 150,000.

ECONOMIC SCIENCE AND STATISTICS SECTION

Although it is beyond question that reliance upon statistics frequently leads to very erroneous conclusions, they always bring forward interesting matters for consideration, and the President of the Economic Science and Statistics Section, Sir RICHARD TEMPLE, certainly chose a very attractive subject—"The General Statistics of the British Empire"—remarking that though statistics are fallible, yet the collation and presentation of them must be regarded as essential to political and economic knowledge. Indeed they are, figuratively, the backbone of information, and without them our knowledge would be invertebrate. Owing to the variety of sources from which the facts have to be drawn for an empire that is spread over the world, and owing to the magnitude of the figures which have to be produced, it will frequently be necessary to state the totals approximately and in round numbers. Again, owing to the largeness of the subject and the limitation of space, it will be impossible to do more thân state the principal facts in the form of an abstract. Our statistics, then, will be grouped under the following headings:—

(1) The area consisting of widely extended regions; (2) the inhabitants of these many lands; (3) the works of man as they are displayed in this vast theatre of action. First, then, the area of the British Empire may be set down at 8,650,000, or more than 8,500,000 of square miles. This area includes the countries which are directly recognized as the component very sof the figure in the property in the groupe in the second contribution of the figure in the property Although it is beyond question that reliance upon statistics fre-This area includes the countries which are directly recognised as the component parts of the Empire in Europe, in the East and West Indies, in Australia, in North America, in South Africa and the possessions scattered among nearly all the regions in the world. Out of this total there are only 120,000 square miles in the United Kingdom. Then there are 1,500,000 square miles in India, and the remainder, or 7,000,000, belong to the colonies and to

there are other regions which, though not belonging to the Empire, have yet fallen, or are falling, under its polit more or less, such as Egypt, including a part of the Egyptian Soudan some districts in Southern Arabia, a part of Borneo, Zululand, the Transvaal, Afghanistan, and Beloochistan. The area of these addi-Zululand, the Transvaal, Afghanistan, and Beloochistan. The area of these additional regions may be set down approximately at 1,103,000, or about 1,000,000 of square miles, and this figure is probably somewhat below the reality. Thus the total area directly or indirectly under the authority of the British Empire may be taken at nearly 10,000,000 of square miles, or about one-fifth of the 50,000,000 of square miles composing the habitable globe. The dimensions of this Imperial area have been ascertained by professional surveys, of which the progress has kept pace with the expansion of the empire. Out of the grand total not less than 2,500,000 of square miles have been topographically surveyed, and of this nearly all has been surveyed minutely field by field. This cadastral survey, presenting the details of every field for a vast area, is to be rekoned among the largest operations ever known in the annals of administration. The remainder has been for the most part either partially surveyed or partially explored. A small portion, however, remains but imperfectly explored, plored. A small portion, however, remains but imperfectly explored, or else almost unexplored. As might be expected in an empire whereof the real basis of power is maritime, the coast line is of an extraordinary length, to be measured by about 28,500 miles, with 48 large harbours; for the whole of this length marine surveys have large harbours; for the whole of this length marine surveys have been prepared. In an empire which lies at both sides of the Equator, and is scattered over both hemispheres, there are varieties of climate touching the extremes of heat and cold. Of the whole, about one-sixth is within the tropics, one-third in the antipodes, one-third in North America, and the remaining one-sixth in the temperate zone of Europe and Asia. But greatness does not depend on area alone, and there is a vast range in the scale of value for lands. For instance, it has been computed that the average letting value of land instance, it has been computed that the average letting value of land in the interior of England is several hundred times as great as that in the interior of Siberia. So in the British Empire there are wide tracts which may be important politically and prospectively, but of which the value cannot be measured by a statistical test.

Out of the 10,000,000 of square miles hardly one-fifth is cultivated or occupied in the widest use of the term occupation. The area, however, which is eachled being knowled and cultivation, and of

however, which is capable of being brought under cultivation, and of sustaining the future increase of population, must be regarded as enormous. It is chiefly in Australia and Canada, in which two divienormous. It is chiefly in Australia and Canada, in which two divisions it may be reckoned at upwards of 2,000,000 of square miles, enough at the lowest computation to support 200,000,000 of souls. Even in India, which is popularly, though not quite correctly, supposed to be thickly populated, the cultivable waste is not less than 250,000 square miles. Then there is a residue which is uncultivable waste, and of which the dimensions cannot be precisely measured. It consists of mountains and forests, with some desert, in the heart of Australia. These mountains are around the greatest ranges in the of Australia. These mountains are among the greatest ranges in the world. The forests are very extensive, and their extent cannot be precisely stated. They are infinitely various both in respect of value and of condition, some being poor or half destroyed, others being rich and well preserved. But there are in the Empire about 100,000 account miles of forests which are being formally and confessionally rich and well preserved. But there are in the Empire about 100,000 square miles of forests which are being formally and professionally preserved to become a mighty source of national wealth. In the second place, respecting the inhabitants, the total population amounts to 305,000,000 of souls in those regions which are included directly in the Empire. If the countries already mentioned as more or less under political control were to be included then about 10,000,000 more would have to be added, bringing up the total to 315,000,000. This mass of humanity is composed of many diverse nationalities, among whom the primary distinction is that of race. There are 45,000,000 of the fair races; among these about 39,000,000 are Anglo-Saxons, including German colonists. 3,500,000 are Celtic (mainly Irish) 1,500,000 are. Franch Canadiany 500,000 are Dutch in South Africa, and there are a certain number belonging to other nationali ties, Scandinavians, Swiss, Greeks, but there are few from the Latin race in South Europe, and hardly any Russians. Again, of the 315,000,000 ethnically there are 45,000,000 of the fair or Caucasian race, 254,000,000 of the Aryan, and 5,000,000 of the Mongolian, the

emainder belonging to the aboriginal races. A cardinal distinction between the several nationalities is that of religion. Christianity, the religion of the dominant race, is professed by somewhat more than the 45,000,000 of the fair races above mentione but the total can hardly exceed 46,000,000 out of the 315,000,000 that is, one-seventh of the whole. The religion which includes t that is, one-seventh of the whole. The religion which includes the largest number is Hindooism. There are 188,000,000 of Hindoos, and it may indeed be said that the whole Hindoo race is subject to the British Crown. The Hindoos then form more than half of the total population in the Empire. Under the generic name of Hindoo, however, there are counted many thousands of Brahmos, who are really Theists, and there are 3,000,000 of Sikhs and Jains, closely connected with Hindooism. Then there are 50,000,000 of Mahomedans under the British Crowse is India and the action that The religion which includes the Mahomedans under the British Crown in India, and then the 10,000,000 more in the Mahomedan countries connected w British Empire—in all 60,000,000. This number exceeds the number of the Mahomedans belonging to any of the Mahomedan States, such as Turkey or Persia, and in fact comprise half the Mahomedan The number of Buddhists is not considerable, amounting to about 7,000,000, chiefly in Burmah and Ceylon, with some Chiacse in Australia and other divisions of the Empire. Then there is a small remainder, about 7,000,000, consisting of Pagans chiefly, the Aborigines of the East Indies, including also the North American Indians, the Australasian natives, and of the African tribes of the Cape.

In the United Kingdom the proportion of urban to rural popula-

tion is large, being more than one-half already, and likely to increase to two-thirds. In England especially the majority of the people dwell in towns. At present a similar tendency is observable in his tralia, where the people are mainly urban. But in the rest of the Empire the mass of the population is rural, a certain percentage only being urban. In India especially it is to be remarked that instants, tenths of the people are in villages, leaving one-tenth only for the towns. If the total population were spread over the total area of the Empire, the average would amount to only 33 persons to a square mile, which suggests a wonderful sparseness of population in a wealthy and prosperous Empire. The sparseness arises from the inclusion in the Empire of tracts, either uninhabited or but algeby inhabited, such as the Himalayas, the frigid regions in the North of Canada, a part of the Rocky Mountains, and the arid desert in the heart of Australia. Indeed, it were almost idle to reckon the average of the population in the total area in the Dominion of Canada, or a Australia. Even in India the general average amounts to only its to the square mile, nevertheless India contains some of the madensely populated districts in the world. In some Indian province a population to be counted by tens of millions, average from 300 to 100 the square mile, and in some Indian districts, with a proposition of the square mile, and in some Indian districts, with a proposition of the counted by tens of millions, average from 300 to 100 the square mile, and in some Indian districts, with a proposition of the square mile, and in some Indian districts, with a proposition of the square mile, and in some Indian districts, with a proposition of the square mile, and in some Indian districts, with a proposition of the square mile, and in some Indian districts, with a proposition of the square mile, and in some Indian districts, with a proposition of the square mile, and in some Indian districts. tion is large, being more than one-half already, and likely to it to two-thirds. In England especially the majority of the densely populated districts in the world. In some Indian promise a population to be counted by tens of millions, average from 300 is 400 the square mile; and in some Indian districts, with a population to be counted by some millions, the average rises to 800, even to 30 on the square mile. As is well known, England (as separate from Wales, Scotland, and Ireland) is the only part of the Empire which is densely peopled throughout, its average per square mile, 43 souls, being almost exactly the same as that of Belgium, the most densely peopled part of the Continent of Europe. Heretofore, under the first two headings, we may have wondered at the smallness of the proportion which the United Kingdom bears to the Empire in respect of area and population.

The British merchant navy consists of 30,000 ships, with 8,500,000 tons, manued by 270,000 sailors. The sea-going tonnage under the British flag amounts to 3,000,000 tons in steamers and 5,500,000 tons in sailing vessels. Now, under the flags of other nations there as 2,500,000 tons in steamers and 9,500,000 in sailing vessels. In othe words, the British Empire surpasses all other nations together in respect of steamers, and nearly equals them in respect of sealing vessels. In respect of carrying power in the world by sea, 19 per cent. belongs to the British Empire and 51 per cent. to other nation Again, out of 550000 ships in the world over 100 tons 21 000 ships in the world ove cent. belongs to the British Empire and 51 per cent. to other nation Again, out of 55,000 ships in the world over 100 tons 21,000 are he The comparison remains in similar terms in respect to the ges of shipping. Out of 129,000,000 tons carried yearly by the sarnings of shipping. Out of 129,000,000 tons carried year, shipping of the world, 63,000,000 are under the British flag. snipping of the world, 63,000,000 are under the British flag. Out of 133,000,000\ell. sterling earned from freight and passengers by the ships of the world, 73,000,000\ell. are earned by British ships. A similar proportion is shown by the port entries of the world, represented yearly by 125,000 tons, of which 57,000 (or nearly half) pertain to the British Empire. In shipbuilding the proportion is still more favourable to the British Empire. Out of 1,800,000 tons built annually, 1,200,000 are built in Great Britain. The total trade of the British Empire cannot be achieved statistically. be exhibited statistically, because the component parts of the Empirare separated by oceans. Consequently, much of the trade is between these parts, and it would be meaningless to sum up the several item. into one grand total. If the aliquot parts of the trade of the principal nations be computed, then about one fifth, or 21 per cent, of the whole belongs to the United Kingdom, and 13 per cent to the colonies and dependencies. Thus, 31 per cent., or one-third, of the world's commerce pertains to the British Empire. The ratio deseaborne commerce per inhabitant yearly is 20l. in the United Kingdom, 31l. in Australia, 9l. in Canada, and 6l. in the United States. In Europe the British ratio is exceeded in Holland and equalled by Belgium, but in other European countries the ratio is far less. In respect to banking the United Kingdom is known to be the busines on earth, and transacts one-third of the business of the world. The total of capital and deposits used in the banking of all nations amounts to 2,508,000,000. sterling, of which no less than 965,000,000 belong to the British Empire representing a proportion of the printing forms. belong to the British Empire, representing a proportion of 39 ps cent. But there is a considerable amount of capital employed by the native bankers of India, amounting to many millions sterling of which the sum cannot be precisely stated. On the whole, it seems that considerably more than one-third of the banking business of the world is done within the British Empire. The same proportion is shown by the sum total of capital and deposits of the banks From this it follows that the average per inhabitant in the United Kingdom is 251, the average for the Continent of Europe being 41, and that of the United States heigh 101. The only country to be conthat of the United States being 10%. The only country to be expared with the United Kingdom is Australia, where the areas is 30%.

The manufactures of the United Kingdom are valued at 818,000,000 sterling annually. Those of the colonies are estimated at 59,000,000. The value of the Indian manufactures cannot be stated, but it must be large. The significance of this will be understood from the fast be large. The significance or this will be understood from the mathat a similar total for the rest of Europe gives 2,600,000,000. In general terms, it may be stated that British manufactures form out-third of those for all Europe put together. The great competitoris, of course, the United States, where the value appears to exceed that of the United Kingdom. The American manufactures are, indeed, wonderful, not only in their present magnitude, but in the rapidity of their progress and in the progress of their extension. Still it is of their progress and in the prospect of their extension. Still, it is difficult to institute a precise comparison, because some items are included in their total which are not reckoned in the United King. dom. Another test is that of factory steam-power; this power in the world is represented by 7,500,000 of horse-power. Of that total 2,250,000, or about 30 per cent, are British. Again, it has been computed that if the main elements of national industry be taken together—commerce, manufactures, mining, agriculture, carring trade, and banking—the total, 2,000,000,000%, sterling and upwards annually, is about the same for the United Kingdom and the United annually, is about the same for the United Kingdom and the United States. But the United States are advancing the fastest, and are already passing ahead. Their population, however—55,000,000. The souls—is greater by 19,000,000 than the British 36,000,000. The aggregate of industries shows an average of 51L per head in the United Kingdom, against 42L in the United States.

The fact, then, that the United Kingdom, despite disparity of population is still able to do nearly as much as its giant offsuring.

The fact, then, that the United Kingdom, despite disparily of population, is still able to do nearly as much as its giant offspring, affords striking proof of sustained vitality in the mother country. It is inferable from this computation that the average of earnings per head in the United Kingdom is 35l. 4s., and exceeds that in the United States (24l. 4s.), and that in Canada (26l. 18s.) But it is actually exceeded by the average in Australia, which reaches apparently the amount of 43l. 4s. per head, and is the highest in the world. Still the rate of earnings in the new countries founded by the Anglo-Saxon race approximates to that of the mother land; but the average rate for the Continent of Europe is only 18l. is. In the average rate for the Continent of Europe is only 18%. In other words, the British rate is more than double. France is the only large European country which at all approaches the United in thi respect, and ne may be the little countries of Belgium, Holland, and Denmark. It follows from these facts that the wealth of the United Kingdom in land. from these facts that the wealth of the United Kingdom in 1800, cattle, railways, and public works, houses and furniture, merchandiae, bullion, shipping, and sundries, valued at 8,720,000,000 sterling exceeds that of any European state, and if just double that of Russia. But it is exceeded by the corresponding figure for the United States—9,495,000,000. sterling. For the British Empire, however, must be added 1,240,000,000. for Canada and Australia, precisely computed on similar terms, and at least 2,500,000,000. for India and other dependencies which cannot be precisely computed, and which may be below the reality. Thus the wealth of the British Empire apparently stands at the truly grand total of 12,640,000,000. Empire apparently stands at the truly grand total of 12,640,000,0001. sterling, which justifies the old expression that this Empire is the richest state on the face of the earth.

Respecting education, there are 5,250,000 pupils at schools in the United Kingdom, 860,000 in Canada, 611,000 in Australia, and 2,200,000 in India, making up a total of 8,921,000 pupils in the British Empire. The number, though large absolutely, appears very small for so vast a population. The fact is, that in India, although education has made a remarkable program within the last general small for so vast a population. The fact is, that in India, although the ducation has made a remarkable progress within the last generation. was enormous, owing tion, yet the lee-way to be made up neglect of many centuries, and many children of a school-goi still remain out of school. The number in the United Kingdon

and up lege bo per cen Colourby the discove

> -ligh want-He use opinio the ho

> > carrie

tricity does using and v

> blade mere dwe unsile cart of P pub and Its trib iron storinst lary dia ma Euch The mo

by with some of the lessor kingdoms, where the progress is most chantery. But the comparison attains special interest when made bly with some of the lessor kingdoms, where the progress is most stiffactory. But the comparison attains special interest when made the United States, where a truly noble progress is exhibited, and where the number of pupils reaches to 10,000,000, the annual spenditure being 17,000,000. sterling. Doubtless the returns in the United Kingdom, but that would not make any attention than in the United Kingdom, but that would not make any ansiderable difference in the comparison of such high figures as these. Thus the extraordinary fact remains, that in respect of educational statistics the United States are numerically in advance of green the British Empire. The religious missions to non-Christian assionalities constitute a bright feature in the British Empire. The statistics of the Roman Catholic missions are not fully known, but their operations are very considerable. The income of the various Protestant missionary societies is hardly less than 750,000. sterling ansally, and the number of European ordained missionaries maintained by them is about 900. This is exclusive of a considerable number of reverend missionaries employed within the British Empire the United States. The number of native Christians under their care, together with children at school, cannot be less than 1,000,000.

The report of the Committee for enquiring as to the teaching of Science in Elementary Schools states that since their reappointment as Southport no legislation affecting the teaching of science in elementary schools has taken place, and it is yet too early to estimate the whole influence of the Education Code of 1882 in that respect. Some indications, however, have been gathered from the Blue-book and from some of the large Boards. The first effect of the change of Code upon the teaching of science is shown in the return of the Education Department for this year, but as the tabulated statements only extend to Aug. 31, 1883, they contain merely the results of those examinations that were made of schools which came under the pew Code between April 1 and Aug. 1, 1882, or about 28 per cent. hose examination and Aug. 1, 1882, or about 28 per cent of the whole. The following conclusions may be drawn:—First

those examinations that were made of schools which came under the new Code between April 1 and Ang. 1, 1882, or about 28 per cent. of the whole. The following conclusions may be drawn:—First, elementary science was taken up by scarcely any schools examined during these months, the number of departments that took it up as the scond-class subject being only 15, while 3988 took up geography, 1644 (girls) needlework, and 114 history. It must be remembered that geography is more scientific than it was before, but needlework is rapidly displacing it in girls school; secondly, the exclusion of the fourth standard from instruction in specific subjects has reduced the number of scholars so taught by 56.6 per cent., but the remaining 434 per cent.—that is to say, the children in standards five, six, and seven, do receive a larger proportion of scientific teaching.

The Anthropometric Committee recommend that a small committee should be reappointed for the purpose of continuing and promoting the collection of anthropometric observations. Some important observations on eyesight are contributed by Mr. C. Roberts. Much unnecessary alarm has been caused in this country by the publication of observations made in Germany on the deteriorating influences of certain occupations, and especially of school and college life, on the eyesight of children and young persons. The statistics collected by the Anthropometric Committee, though not so numerous as could be wished, show that no such deterioration occurs in England, but, on the contrary, that between ages 10 and 40 years a slight improvement takes place, a result which might be expected from the operation of the physiological law that the function of an organ increases with its use. A table is given to show the relation which the two tests bear to each other when applied to the same individuals. The general disposition of the figures shows that the sight which is proved to be good by one test is good also by the other test; but there are some notable exceptions to this rule, a few the extent of 2.5 per cent.

MECHANICS SECTION. MECHANICS SECTION.

The use of Secondary Batteries for Telegraphy was treated of in a paper by Mr. W. H. PREECE, who described successful experiments made with them in the London Post Office. They showed great economy over primary batteries or dynamos when used on a large scale. Domestic Electric Lighting was dealt with in another paper by the same author, in which he describes the fitting up of his own house, which has been done not so much to determine the cost as to discover faults, troubles, paisages, and the argument of supervision. discover faults, troubles, nuisances, and the amount of supervision necessary to keep it going. His house is really gas-lighted, but the gas is burnt in the garden where he extracts that which he wanted necessary to keep it going. His house is really gas-lighted, but the gas is burnt in the garden where he extracts that which he wanted—light, and discharges harmlessly into the air what he does not want—poison. The gas-engine, dynamo, and fittings were described. He uses secondary batteries, of which he expressed a very favourable opinion. He has constant night and day service, and can illuminate the house at any moment in an instant. Even his daughter's doll-house has its four rooms lighted by little fairly lamps. The use of only 30-volt pressure reuders safety from shock or fire certain. He carries the light throughout his garden, and can visit his green-houses any hour of the night. He can even light a cigarette by electricity. Mr. Precee regards electric lighting still as a luxury, and estimates the cost of fitting a house like his at 71.10s, per lamp. He does not expect to consume more gas than hitherto, while he has filtered light and purified air. The advantages are the steadiness and comfort of the light, the durability of the decorations, the absence of heat and destructive gases, pure air, and longer life to all using electric light. Its economy consists in being used only when and where wanted. If it costs twice or thrice what gas does it need only be used half or one-third the time; gas is needlessly wasteful. He spoke hopefully of the future of electric lighting, and believed everyone would have it if electricity were supplied at our doors.

Anthroppology Section.

ANTHROPOLOGY SECTION.
In his presidential address Dr. EDW. B. TYLOR remarked that the In England anthropologists infer from stone arrow-heads and hatchet blades, laid up in burial moulds or scattered over the sites of vanished to villages, that stone-age tribes once dwelt in the land; but what they were like in feature and complexion, what languages they spoke, what social laws and religion they lived under, are questions where speculation has but little guidance from fact. It is very different when under our feet in Montreal are found relies of a people who formerly dwelt here, stone-age people, as their implements show, though not unskilled in barbaric arts, as is seen by the ornamentation of their earthen pots and tobacco-pipes, made familiar by the publications of Principal Dawson. As we all know, the record of Jacques Cartier, published in the 16th century collection of Ramusio, proves by text and drawing that here stood the famous palisaded town of Hochelaga. Its inhabitants, as his vocabulary shows, belonged to the group of tribes whose word for five is wisk—that is to say, they were of the Iroqueis stock. Much as Canada has changed since then, we can still study among the settled Iroqueis the type of a race lately in the stone-age, still trace remnants and records of their peculiar social institutions, and still here spoken their language of strange vocabulary and unfamiliar structure. Peculiar importance is given to Canadian anthropology by the presence of such local American types of man, representatives of a stage of culture long passed away in Europe. Nor does this by any means oust from the Canadian mind the interest of the ordinary problems of European anthropology. The complex succession of races which make up the pedigree of the modern Englishman and Frenchman, where the descendants, perhaps

of paleolithic, and certainly of neolithic man have blended with invading Keltic, he inherit-Keltic, Roman, Teutonic-Scandinavian peoples—all this is eritance of settlers in America as much as of their kinsfolk who

the inheritance of settlers in America as much as of their kinsfolk who stayed in Europe.

Of late no great progress has been made toward fixing a scale of calculation of the human period, but the arguments as a time required for alterations in valley-levels, changes of fauna, evolution of races, languages, and culture, seem to converge more conclusively than ever toward a human period—short, indeed, as a fraction of geological time, but long as compared with historical or chronological time. While, however, it is felt that length of time need not debar the anthropologist from hypotheses of development and migration, there is more caution as to assumptions of millions of years where no arithmetical basis exists, and less tendency to treat everything prehistoric as necessarily of extreme antiquity, such as, for instance, prehistoric as necessarily of extreme antiquity, such as, for instance, the Swiss lake-dwellings and the Central American temples. There are certain problems of American anthropology which are not the less interesting for involving no considerations of high antiquity; indeed, they have the advantage of being within the check of history, though not themselves belonging to it. Humboldt's argument as to traces of Asiatic influence in Mexico is one of these. The four ages in the Aster nighter, writings, ending with extestroples of the as to traces of Asiatic influence in Mexico is one of these. The four ages in the Aztec picture-writings, ending with catastrophes of the four elements—earth, fire, air, water—compared by him with the same scheme among the Banyans of Surat, is a strong piece of evidence which would become yet stronger if the Hindoo book could be found from which the account is declared to have been taken. Not less cogent is his comparison of the zodiacs or calendar-cycles of Mexico and Central America with those of Eastern Asia, such as that by which the Janaces regions the Course work has comparison. by which the Japanese reckon the 60 year cycle by combining the elements seriatim with the 12 animals, mouse, bull, tiger, hare, &c.; the present year is, I suppose, the second water ape year, and the time of day is the goat hour. Humboldt's case may be reinforced by the consideration of the magical employment of these zodiacs in the Old and New World. The description of a Mexican astrologer, sent for to make the arrangements for a marriage by comparing the zodiacs. to make the arrangements for a marriage by comparing the zodiac animals of the birthdays of bride and bridegroom, might have been written almost exactly of the modern Kalmuks; and, in fact, it seems connected in origin with similar rules in our own books of astrology.

NOTES ON RESEARCHES AS TO AMERICAN ORIGINS. NOTES ON RESEARCHES AS TO AMERICAN ORIGINS.

Mr. HYDE CLARKE, D.C.L., reviewed the paper he had contributed
"On American Origins" to the British Association and other societies, and stated the result of his investigations in their present
development. Without entering into any defined statement as to
the intercourse between the Eastern and Western hemispheres in the
earlier epoch of gesture language, he inferred it from various facts.
The ideographs were also of the early epoch. The invention of speech,
which took place in the Eastern hemisphere, and was transmitted to
the Western, created a great psychological and historical revolution.
With this latter epoch we can connect the numerous phenomena of
language, culture, and mythology, the resemblances of which have With this latter epoch we can connect the numerous phenomena of language, culture, and mythology, the resemblances of which have been so long noted. The adaptation of a phonetic system to ideas expressed by gesture, as explained by Mr. Clarke in the Journal of the Association, depended on the full application of the observations of Mr. Alfred R. Wallace, that in many languages the mouth, tooth, and nose were severally represented by labials, dentals, and nasals, These are applied primarily and secondarily, &c., in series, as from mouth, eye, ear, sun, moon, egg, blood, eat, speak, &c., and with various conventional and symbolic meanings. The resemblances among languages did not depend upon descent from one primeval language, but on the propogation of languages based on one phonetic and psychological system. Of such resemblances he instances that of Yahgan, of Tierra del Fuego to West Africa. He recalled that the geological nomenclature of America in names of recalled that the geological nomenclature of America in names of mountains, rivers, lakes, and towns corresponded with that of the old world. The animal names were of common origin with the muta-

world. The animal manes were of common origin with the industrion of tapir, with elephant, puma, with lion and tiger, llama, &c., with horse. The mythology or fetishism shown by the Bribri of Central America was in conformity with an identical origin.

A variety of facts of common propagation had to be accounted for, and although intercourse across Behring's Straits and the Pacific would partially explain, there must have been direct and continual intercourse across the Atlantic, assisted by the currents. He rejected the greaterist have been continual intercourse across the Atlantic, assisted by the currents. the geological hypothesis of an Atlantis extending across the ocean, and now submerged,; but considered the traditions in the dialogue Timaens, of Plato, to represent broadly the antecedent conditions. America had come under the dominion of an Atlantis, or Great King America had come under the dominion of an Atlantis, or Great King of the West, with territory also in Mauritania, Spain, and Britain. His defeat in naval contest in the western Mediterranean by the leading kings of the East was an efficient cause for the cessation of intercourse with America. The legend of the sinking of Atlantis, and of the filling up of the ocean with mud so as to make it impassable were mere excrescences on the legend, but had fascinated most students. If we treated the elephants as tapirs and the horses as llamas and beasts of burden, not dealing with the detail of the legend too strictly, then the legend itself, freed from impossibilities and inconsistencies, acquired consistency. Mr. Clarke, in combination with sistencies, acquired consistency. Mr. Clarke, in combination with that of the Atlantis, dwelt on the legend of the Four Worlds, as showing a former knowledge of the configuration of the Americas in the ancient world. According to his investigations the languages and culture of America are not of local growth, but imparted by a higher race at the period of the foundation of like institutions in the eastern world. The differences he assigned to distinct development chiefly consequent on the breaking off of intercourse.

THE SOUTH STAFFORDSHIRE COAL FIELD,-The report of the THE SOUTH STAFFORDSHIRE COAL FIELD.—The report of the joint excursion of the Chesterfield and Derbyshire Institute of Mining, Civil, and Mechanical Engineers and of the South Staffordshire and East Worcestershire Institute of Mining Engineers in last week's Mining Journal extended to the Thursday evening. The following day's proceedings were of an equally interesting character, Mr. Alexander Smith, M.I.C.E., the hone secretary, favours us with a report Alexander Smith, M.I.C.E., the honesecretary, favours us with a report that on Friday the members made a tour through the Black Country—from Hamstead to Wolverhampton—for the purposes of visiting the various collieries and points of interest in South Staffordshire, with the object of giving the members a general idea of the whole of the extensive coal fields for which the district is so famous. The party left Birmingham (New-street) for Perry Barr, and from thence they proceeded to Hamstead Colliery, where they were met by Mr. Smallman, one of the directors, and Mr. Mucham, general manager. Having been joined by the Dudley contingent, who were conveyed to Hamstead in brakes, the party at once proceeded to inspect the surface plant, the necessary explanations being given by the officials named. At Sandwell Park Colliery the whole of the extensive surface plant, consisting of 10 steam-engines, a large number of boilers, In his presidential address Dr. Edw. B. Tylor remarked that the newly-constituted section of anthropology, now promoted from the lower rank of a department of biology, holds its first meeting under remarkable circumstances. Here in America one of the great problems of race and civilisation comes into closer view than in Europe. In England anthropologists infer from stone arrow-heads and hatchet blades, laid up in burial moulds or scattered over the sites of vanished villages, that stone age tribes once dwelt in the land; but what they remark the stone and complexion, what languages they spoke, what East worcestershire coal field can be distinctly seen. As on the previous day the whole of the journey was carried out by the advice and assistance of Mr. Alexander Smith, M.I.C.E., and secretary of the local institute, and Mr. Henry Johnson, jun. The party next proceeded to Dudley, where they lunched at the Dudley Arms Hotel. Prof. Brown presided, and some 90 gentlemen supported him at the meal. Messrs. Morris Brothers drove the party to the Castle Hill, where the rules grounds and caverns were inspected under the where the ruins, grounds, and caverns were inspected under the guidance of Mr. E. Fisher Smith, Lord Dudley's principal mine agent. From the hill the party went to the celebrated open works of Lord Dudley, at the Foxyards. The party then reached the Wolverhampton-road, and proceeded to the Exhibition held in that town. Previous to breaking up votes of thanks were passed to Lord Dudley, vious to breaking up votes of thanks were passed to Lord Dudley, Mr. E. F. Smith, Mr. A. Smith, and Mr. H. Johnson, jun.

HOLLOWAY'S PILLS AND GINTMENT-RHEUMATISM AND GOUT. HOLLOWAY'S PILLS AND GINTMENT—RHEUMATISM AND GOUT.—These purifying and soothing remedies deserve the earnest attention of all persons liable to gout, scistics, or other painful affections of the muscles, nerves, or joints. The olutiment should be applied after the affected parts have been patiently formented with warm water, when it should be diligently rubbed upon the adjacent skin, unless the friction causes pain. Holloway's pills should be simultaneously taken to diminish pain, reduce inflammation, and purify the blood. This treatment abates the violence, and lessens the frequency of gout, rhounatism, and all spasmodic diseases which spring from hereditary pre-disposition, or from any accidental weakness of constitution. The clutment checks the local malady, while the pills restore vital power.

### Meetings of Bublic Companies.

CAMBORNE VEAN MINING COMPANY.

PROPOSED CONVERSION INTO A LIMITED LIABILITY COMPANY.

PROPOSED CONVERSION INTO A LIMITED LIABILITY COMPANY.

An important meeting of shareholders was held at the offices of the purser (Mr. R. S. Teague), Redruth, on Sept. 4.

The PURSER, who remarked that the gentleman he should name had an important scheme to lay before them, proposed that Mr. FIDLER (of Newbury), the largest shareholder present, be invited to take the chair.—This was seconded by Mr. W. H. RULE, and adopted.

The notice convening the meeting having been read, the PURSER submitted the balance-sheet. This showed that the labour costs for four months were 2321; merchants bills, 651; Employers' libbility, 31; bankers' charges, 121, total, 333. On the credit side copper ore realised 1104 (on account, the actual receipts being 1141,) leaving a balance of 2534, and increasing the debit balance to 2701.

The report of the agent having been read, this stating that operations during the past four months had been limited on the north and south lodes. Referring to the mine, Capt. PRISK remarked that from the commencement their workhad been conducted on a limited scala. He had hoped that they would have met with more success in the shallower levels. They had an extensive sett, and he wished they could do more. Their object that day, he added, was to see if they could not arrive at a declaion to extend operations in the direction of forking the mine.

Capt. CLEMO, who had worked in the mine before its stoppage, was appealed

hey could not arrive at a decision to extend operation of the mine. Capt. CLYMO, who had worked in the mine before its stoppage, was appealed to as to the prospects in the bottom levels, and spoke encouragingly. There was a large tinny lode in the bottom of the mine. It was not, however, when the onneers was abandoned, rich; but produced from 2% to 3 per cent. of tin.

Mr. W. H. Rule: Is the Dolcoath south lode running through our sett?—Dapt. Prisk: Yes.—The CHAIRMAN: You can walk upon it.—Mr. Rule: It has been reported as running through Camborne Consols sett.—Capt. Patsk:

others name 30,000. to 40,000., so that really before any definite sum can be stated the question must have more consideration; but as we have reason to hope that we shall rival our rich neighbour in productiveness, I can only repeat that the capital to be provided should be ample. The conclusion arrived at therefore, is that the only plan open to us is the one suggested—to convert the company into a Limited Liability company, with a sufficient number of 11, shares, the present shareholders having the power to exchange their shares for fully paid shares in the new company, the new shareholders to find the money required for working the mine. We have, we believe, the finest property for mining enterprise that can anywhere be found, either home or abroad. Just across the boundary, not many yards east of your shaft—which is already down more than 300 fms. from isurface—you know perfectly well—because your neighbour has proved it for you by opening on it—that at a depth not much greater than you have already sunk, there is untold wealth in the mineral lodes that run you have already sunk, there is untold wealth in the mineral lodes that run through your sett—all virgin ground. For some time past you have seen that the deeper it is sunk the richer it becomes, and to show you how near you may be to a great course of tin I should like to read to you a few words from Capt. Josiah Thomas's statement at the last Dolcaath meeting. He said—"I told you at the last meeting, three months ago, that Harriett's part was gradually improving, and now we have in that part of the mine such an improvement as wery important piece of ground. You expected," He goes on to say "This is a very important piece of ground which lies between the two shafts—Harriett's and Camborne Yean. "This," he says, "is a very important piece of ground, as it is not less than 300 fms. from Harriett's shaft to our western boundary"—that is your eastern boundary—and I have your proportion. The man who have not the mine is looking great hopes that we shall hav

r. J. DA he CHAI when t

mly to a

other Mi Crittend of this opinion it to interfiresponsil point w Orittend No dou ledge

thought get resul would re acquisiti

called up
was poss
machine
Crittend
they, th
gold in
the dire
owners

compan compan compan rememb tenden the com ficient i though

Camborne Vean, and he tells you that the lode in that part nearest to us looks quite as well as their immensely rich lode looked when they first got into the granite. Here, then, are two pieces of land, two properties adjoining each other, in all respects alike, with the same lodes running through both. The land is the same in full course of development, finding employment for land hands, and making splendid profits for the shareholder; the other walst surve equal auccess, and find employment for 500 or 1000 hands, perhaps, for constaries. Now, if each of you would put down 2t, or, say, 3t, per share, the difficulty would be met and the work would be done; but you are not prepared to do this, and so we are in this fix—that although we are most auxious the thing should be done we have not the means of doing it. What, then, ought we to do under the circumstances? It is most clear to me that the only thing we can do is to go to the public and say—"We, and others, have spent a lot of money in sinking shafts and other necessary work; we are now within sight of the prize, having actually got into the granite and into the tin ground, and sunk it is several fathoms, but we are not as deep as Dolcoath. We must yet go deeper, but our resources are exhausted. Will you help us? We have spent so much per share, and we ark you to spend a like sum, if so much would be required, and your shares shall rank with ours. Thus, so far, seems to me quite fair, but then comes the difficulty. If you sak your seighbours to join you, will they do so in sufficient numbers and for a sufficient amannet. Some of you will say Yes, and others No. My own opinion is, that the large sum we want can only be raised by those who make this their business. I dazesay it is a lucrative business, perhaps even more so than mining; hout they do for you what you cannot do for yourselves, and they must be paid for it. It will require all the resources at their command, and if we adopt this plan our policy should be to give them all the help we can. They have

an effectual way. He was disgusted with the amount sometimes enarged for promotion money.

Capt. SOFTHEY remarked that it was important to know what the charges for raising the money would be; and

Mr. P. W. Michell. remarked that it was important to guard against the promoting agents having the power to place shares of their own on the market, sud damaging the company. He recollected a case where certain persons who raised money for an undertaking were given a number of II. shares, and these people forthwith went on the market, sold the shares for 7a. 6d. each, and wrecked the concern.

The CRAIGMAN admitted that this was an important point, and had not excepted him. He was of opinion that the present shareholders should not sell any shares till the company was formed. Then the financiers, who would be paid in shares for their work, would not have any shares until the company was formed.

remed.
Mr. Rowz (Tinerest) suggested that the financiers who should be called upon
e paid in cash, after the larger portion of the capital had been subscribed.
Mr. Ruzz remarked that there were two or three firms in London prepared to

the company.

F. W. MICHELL was of epinion that Mr. Rowe's suggestion was the only

Mr. F. W. MICKELL was of spinion that Mr. Rowe's suggestion was the only way to zoet the difficulty.

The CHAIRMAN felt that the financiers would not immediately sell their shares in the event of their having them, but would wait for a rise.

The resolution was agreed to.
Captain Sourmars said they had had examples of Limited Liability companies in Cornwail, and he should be sorry to see Camborne Vean, resulting in a like failure. They should be careful in selecting promoters.

The CHAIRMAN presumed that Captain Bouthey alluded to certain mines started with a large amount of promotion money, and in connection with which little had been done in the shape of the development of the mines.

Captain Southway: That is generally the case.

The CHAIRMAN said that they must avoid anything of the kind. He knew that Cornishmen had a certain distrust of Limited Liability concerns. It must be recollected that the Act was very stringent, but they could not prevent in that Act, as in certain distrust of Limited Liability concerns. It

Suggested.

Mr. John Abber, who claimed as a stranger to have some knowledge of LiaMr. John Abber, who claimed as a stranger to have some knowledge of LiaMr. John Abber, who claimed as a stranger to have some knowledge of LiaMr. John Abber, who claimed have could float the mine as well as any finanelers in London. What people outside the county required was confidence. In
tegard to Cornish Limited Liability companies started by London companies, he
knew that the public ouside positively had a horror of them. If (say) a dozen
Cornish shareholders having confidence in the conesa, signed the prospectus,
believing that the prospects of the mine were good, he had no doubt as to their
success.

The Pursez (Mr. Teague) felt that the suggestion of Mr. Abbey was an excessor one. They would save several thousands of pounds in adopting it, in preference to employing financiers.

Mr. Michell thought that 30,0001, judiciously and carefully spent would be sufficient.—The OHALIMAN agreed.

The accounts and report baying been adopted, the meeting was adjourned for faw weeks, it being arranged that the Chairman have full power to enquire into the subject of terms.

### CANADIAN COPPER AND SULPHUR COMPANY.

A general meeting of shareholders was held at the offices of the company, Queen-street-place, on Monday, to discuss the position of the company,—The chair was occupied by Mr. J. W. MACLURE.

Mr. RICHARD GARLAND (the secretary) read the notice calling

the meeting.

The CHAIRMAN said that since the last meeting held in April the The CHAIRMAN said that since the last meeting held in April the directors had taken various opportunities of addressing the shareholders and debenture-holders, but the result of those communications had been that but very few replies had been received. The meeting to-day was also very thinly attended, and on behalf of his colleagues and himself he must express) his very great atonishment that the shareholders seemed to take so little interest in awing a property which he believed to be very valuable, but one which the directors themselves could not, through their own personal efforts, continually maintain in a state of efficiency in order to develope it for the benefit of the general body of shareholders. To allow the company to go into liquidation, and to be submitted to a formed sale at the present moment would be a mose ratious thing to those the same string of the same string that the same string at the same directors had taken various opportunities of addressing the share-holders and debenture-holders, but the result of those communica-

ores the result would be successful; and the probability was, that if nothing was done by the shareholders, some other gentlemen, probably the gentlemen who were now pressing the company for money, would form themselves into a syndicate or something of the sort, and buy the property at very much depreciated value, and in one or two years they would attain the satisfactory results, which it would be the fault of the shareholders if they did not avail themselves of the opportunity of obtaining for themselves. Mr. Bird, Mr. Lambert, and he himself were properted to take their proportion, and, probably, considerably more than their proportion, in the concern, in which they had great confidence, and would continue to give every assistance they possibly could in developing the property. The directors made this appeal as strongly as they could, especially to the large shareholders, who really seemed to be utterly regardless of their own interests in not attending the meeting and looking after their own property, which some of them knew to be a property of a very valuable kind.
Mr. Fora saked the result of the action taken in connection with the debentures in the Canadian courts?
Mr. Jospa sked the result of the action taken in connection with the debentures in the Canadian courts?
Mr. Jospa sked the result of the company's solicitor, in order to be registered, so that they might rank in the event of a forced sale, and have their interests properly protected, and those debentures were a first charge upon the property.
Mr. Fora and he supposed these debentures were a first charge upon the property.
The CHAIRMAN said that no doubt wages would come first.

Mr. FORD said he supposed these debentures were a first charge upon the property.

The CHAIRMAN said that no doubt wages would come first.

Mr. HOLMES said it seemed by the Canadian law that in the case of a creditor getting execution there were certain preferential claims—the payment of the employees of the company, and then when the property was sold the money divided in the Canadian Courts amongst those who sent in their claims.

Mr. Ford said he asked the question in order to know whether the next 40,000 would be in the same position.

Mr. HOLMES said the 40,000 would be transferred to trustees, and would be a first charge.

charge. JOSEPH: Exclusive of the board how many persons have applied for tures?—The CHAIRNAN: About five, to the amount of not more than

Mr. Joseph: Exclusive of the board how many persons have applied for debentures?—The Chairman: About five, to the amount of not more than 1000?

The Chairman, in reply to a further question, said that absolute security would be given to the 40.000? according to Canadian law.

Mr. Joseph said he objected to the issue of preference shares or further debentures as they would override the interests of the ordinary shareholders. It would be much better to start a new company sitogether, and call it the New Canadian Copper and Sulphur Company, which could lease the works from the old company. Since he had been a shareholder one part of the business of the company had been in abeyance—the making of sulphur. Caph Bennetts had stated that the ores had 3 per cent. of copper and 40 per cent. of sulphur, and he certainly thought the company ought to put up reduction works, and the sulphurous vapour condensed into sulphuric acid. His suggestion was that the new company sound be formed with a capital of 50,000?, in shares ot 1% each, of which 2s. 6d, per share should be paid on application, and 7s. 6d. per share on allotment, and the remainder to be called up as might be necessary. The old company to lease to the new company the whole of the property for 2500%, of which 1200%, would pay interest upon 15,000%, and 1300%, would pay interest upon 15,000%, and 1300% would pay interest upon 15,000%, capital of the new company, if all called up; 1500% to recoup the new company the 15,000%. The profits he had mentioned were not large amounts on the 400,000% which had been laid out on the property. Mr. Joseph then went into some further figures to show the beneficial effect of the course he advocated, and said that the new company, if formed, would save the old company, and the new company would pay handsome dividends. He knew an instance in which a similar course of action succeeded in connection with ano

A conversation ensued, in the course of which very general approval was expressed of the suggestion of Mr. Joseph, and that gentleman further suggested that perhaps a company could be formed to take over this company and also the Huntington Company.

The CHAIRMAN said that such a scheme had been under the consideration of the directors, but circumstances; had occurred which had prevented it being brought before the shareholders.

In the end the following resolution was passed:—"That the directors be authorised to carry out negociations for the amalgamation or leasing of the company's property."

ompany's property."

A vote of thanks to the Chairman and directors closed the proceedings.

### KIMBERLEY CENTRAL DIAMOND MINING COMPANY.

A general meeting of shareholders was held at the offices of the agents, Messrs. Freeman and Bloomfield, Holborn Viaduct, on Tues-

KIMBERLEY CENTRAL DIAMOND MINING COMPANY.

A general meeting of shareholders was held at the offices of the agents, Messrs, Freeman and Bloomfield, Holborn Viaduct, on Tuesday,

Mr. BARING GOULD in the chair.

The CHAIRMAN said the notice convening the meeting had scarcely been correct in stating that the meeting had been called to receive the report. The report had already been received in Kimberley, and though they could discuss it and send out any resolutions embodying their wishes, the meeting had no power to alter anything that had gone before. As there were some recent shareholders first joined the company it was felt that there was some need for them to meet together for the outpropes of asking for and receiving such information as those who had been at Kimberley, or were still in connection with it, could give them. They might from the directors and siareholders out there, for out of the total capital of sligood, odd, 350,000, at least was held in England, so that as more than one-half of the shares were held in England they had a right to expect that, at all events, their views about the section religied out there. Beddes stranging for the strangent of the strangent of

directors for what they had done on that occasion, and I have no done ever that this meeting will join with me in expressing their thanks to tors in the terms of this resolution.—Mr. Atkinson seconded the which was carried unanimously.

Mr. Crofton said with reference to making the Central Company as company had any proposals been made, or had correspondence passed the committee and the directors at kimberley?—The Ohleman, is aid that almost the whole of the time occupied by the committee since matter that the second of the committee since and the directors the advantages of an English connection. They saw very well that those who bought a English company it would be appreciated at its just worth; but shareholders in England had no means of knowing what their share really be stated at Reverslauggestions had been made as to joining the company, and as to amalgamating the North Block, and altogether the conce in England had been very much connected with the burning que making the company an English company in some way or other.

A SHAREMOLDER said he supposed the great objection was, that the directors are the contraction of the company of the c

A BRAKENDERS and a supposer.

The CHAIRMAN replied that they would not wish for a moment to diswith a strong board in [Kimberley. They would wish to have men of infand position as a local board—men who had proved themselves capable of a might perperty.

Mr. NICHOLSON suggested that a resolution should be passed to this edge. "That, as in the opinion of this meeting it is highly desirable to from the berley Central Diamond Mining Company into an English company, and a quotation on the Stock Exchange as soon as possible, the directors are quested to do all in their power to further this object." Such an arrange would, no doubt, enhance the value of their shares a great deal, as, with a Exchange quotation, the dealings in the shares would become more numeral world, no doubt, enhance the value of their shares a great deal, as, with a Exchange quotation, the dealings in the shares would become more numeral thought the Kimberley board had a great deal too much to do a present, a thought the Kimberley board had a great deal too much to do a present, a had quite enough to do look after the development of the mine. At them time the mine was \$5,000l. in debt, and they were paying to 12 per cent, they wanted at 5 per cent,; so that, by having better arrangement, these be a clear saving of some thousands a year in interest. He thought they worked at 5 per cent,; so that, by having better arrangement, these be a clear saving of some thousands a year in interest. He thought the berley directors should be relieved from all financial questions, for the condition of the conditi

pany. They would have quite enough to do to manage the working options.

In the course of some further discussion it was pointed out that the lange cently offered by the Kimberley Mining Board should not have been been out, for there was no chance of its successful issue.

The Chairman pointed out that there was not much choice of relie qualified to act as directors of the company in Kimberley, and he thought of the their services, and give them as much authority as might be thought as for their services, and give them as much authority as might be thought as falle. It was to be remembered that most of the men out there were dissent buyers, and it would not be proper that the company should be controlled those whose interests were more or less opposed to the interest of the company at all events it was only equitable that the shareholders on this side, longer the majority, should have a predominating voice in the affairs of the company with power to add to their number.

Mr. Atkinson congratulated the board on the changed mode of writing the adoption of the principle of working by contract, and for the stepts had taken to do away with the reef rate. He also added that the accounter presented in a better form than on any previous occasion.

Votes of thanks were passed to the Chairman and committee, salthin board in Kimberley, and the meeting then closed.

### BEREHAVEN MINING COMPANY.

An extraordinary general meeting of shareholders was held in Dublin, on Sept. 4, to consider the resolution:—" That the compare be wound-up voluntarily."

### Mr. EDWARD FOTTRELL, J.P., in the chair.

At the annual meeting on Feb. 5 a committee of sharsholders a appointed to confer with the directors as to the feasibility of raising sidissic capital or making sale of the mines, and empowering them to enter intervisional agreement for either purpose. On July 21 the committee repose. We have failed to obtain a purchaser for the mines and plant, and see up bability whatever of obtaining fresh capital; we, therefore, recomments steps be immediately taken to wind-up the company voluntarily with the impossible expense, and that all further expenditure that can be avoided side once cease.

once cease."

The CHAIRMAN, in moving that the company be wound-up wintarily, said it was unnecessary to to go over the history of thempany since 1870, when they had the most flattering hopes that my were in possession of a profitable property. The mine hal has worked to the best of their ability, and with the best assistance, all year after year they had hoped that a change in the ore market would all been realized, and no alternative was left to them but to give up to sink which it was resolved to do at their meeting in February last. With risem to the efforts of the committee of shareholders appointed to sell the mine, but to ne exception—though they had been in correspondence with person nected with mining interests in England—they had not received any infamile of an offer to purchase. This was owing to the state of mining poperty in the state of the committee of the companies which had been formerly propercuise of the committee, which was to wind-up the concern.

Mr. T. BRUNKER, in seconding the resolution, said that being a member discommittee appointed, he visited the mines in conjunction with Oak, Surrow, a gentleman of great experience. They went to the bottom of the sand upade a thorough investigation, the result of which was the conditions and made a thorough investigation, the result of which was the conditions the even if they found ore, which no former occasions they would rejoin the done, the state of the copper market would deter them from working h. The CHAIRMAN said that the committee who reported in favour of which up had been appointed by the shareholders, and it was the result of the company were very few. They had 9000 in bank, one cargo denote the state of the company were very few. They had 9000 in bank, one cargo denote the state of the company were very few. They had 9000 in bank, one cargo denotes the company were very few. They had 9000 in bank, one cargo denotes the company were very few. They had 9000 in bank, one cargo denotes the company were very few. They had 9000 in bank, one the CHAIRMAN, in moving that the company be wounder to be before of the

constituted the assets; what the expenses of winding up which forstell.

Mr. BRUNKER said no member of the present committee made any invaint in shares since their investigation. Since a short time before the scond all had never invested a half-penny. From the time he bought the last said read two calls. He and the other members of the committee had fully saidered the matter before they arrived at the recommendation which they had there would suffer, and they, therefore, came to the conclusion that the test thing they could do was to wind-up.

The resolution having been adopted, the CHAIRMAN, on the part of the distort, asked the attendance of the shareholders three weeks hence to confirm the resolution which they had just passed.—This terminated the proceeding.

VAN RAILWAY.—At the meeting on Thursday (Mr. A. B. Bowlton-Knight, vice-Chairman, presiding), the directors submitted it statement of accounts for the six months ended June 30, day or field by the auditors, Mesers. F. Hunt and S. Catterson. The boards great that the result is not forward by the first fied by the auditors, Messrs. F. Hunt and S. Catterson. The boarding ret that the result is not favourable. This is occasioned by the first returns being less than at any time heretofore. The mineral traffic from the fe Mines was considerably less than usual during the months of May sad far. Mining operations at Van have for a time been suspended. It is, however, anticipated that work will be resumed at an early date. The available sinding the loss fer the past half-year's working -981, 17s.—leaves a disposite balance of 681, 3s. 4d. The capital account remains unchanged, the lains being 1021, 17s. de. The resumed at an anticipate sinding the loss fer the past half-year, per successful to the second, the lains of the second of the sec , 1884

ON-BERLYN (TRANSVAAL) GOLD FIELDS COMPANY

general folio), vesterday—Baron Albertz Grant in the chair segment Hotel, vesterday—Baron Albertz Grant in the chair shapers of considering, and if approved, passing a resolution state of the company was found to the company and segment of the company was formed. He said the date of the project of the company was formed. He said the date of the project of the company was formed. He said the date of the project of the company was formed. He said the date of the project of the company was formed. He said the date of the project of the company was formed. He said the date of the project of the company was formed. He said the date of the project of the company was formed. He said the date of the project of the company was formed. He said the date of the project of the company was formed. He said the date of the project of the company was formed. He said the date of the project of the company was formed. He said the date of the project of the company was formed. He said the date of the project of the

that as with regard to their resident director, Mr. Owen. Somehow or other Mr. Owen had not managed to get on comfortably with either Mr. Crittenden, Professor Heddle, or Mr. Guinness. What the exact causes of this were he would not now go into; but the directors had formed the epinion that, in the interests of the company, it was wise to ask Mr. Owen not to interfere further with Mr. Crittenden or Mr. Guinness, and leave those two responsible managers to their responsibility. But he might mention that one point which chagrined Mr. Owen was that he considered that Mr. Orittenden, in his report, had underrated the value of the property So doubt, Mr. Crittenden had given his report with a full knowledge of the responsibility which it involved. Possibly Mr. Owen might be right in his higher valuation of the property, and certainly through they had, and Mr. Crittenden had expressed his belief that they would refer to another matter which had led to some little discussion—the acquisition of another property called the Dempster Reef. The circumstances called upon Mr. Crittenden for his opinion upon it, and also to see whether it was possible to enter into some arrangement by which his company, having crittenden and Mr. Crittenden for his opinion upon it, and also to see whether it was possible to enter into some arrangement by which this company, having crittenden and Mr. Guinness had no authority to enter into any contracts, but they, thinking that the property was so valuable, and one which would yield the directors, with the option to adopt it or not. The terms were that the company erecting a 10 to 20 stamp-mill, and Mr. Crittenden stipulated that the company served that the directors had sent out 60 heads of stamps, and Mr. Crittenden the company is property—one at each end of the property, which would be sufficient for two years; so there would be 30 stamps to spare, and Mr. Crittenden thought that, rather than allow those to remain idle, it would be well to put 12

or 15 of them upon the Dempeter property, so as to get produce by the end of the year, which would be doing a good thing for the company. Therefore, he made the provisional agreement which had been sent home. At first sight the directors did not see the desirability of acquiring the other property; but on taking all the circumstances into consideration, and seeing that there were spare stamps to erect on the property, and that the two properties could be worked together, and also that it would probably lead to earlier produce, the directors had come to the conclusion that it would be wise, and in the interests of the shareholders, to ratily the provisional agreement, and they recommended the shareholders to agree to the terms, and Messrs. Oritenden and Guinness would receive 10 per cent. of the benefit of the profits. He would now come to the question of finance. As regarded the prospects of the company they were in no way deteriorated, and the only variations had been in the various estimates of quantities, and the question of the yield between the various reporters. But they all agreed that the company had a valuable property, and they had added the valuable bempster reef. Therefore, they were in an excellent mineralogical and landowning condition, and they now wanted to discuss the financial condition. In the original prospectus they were in an excellent mineralogical and landowning condition, and they now wanted to discuss the financial condition. In the original prospectus issue of the prospectus. The thick could not dispose of the company was 200,000. of the company and partly to the fact that the shares of the Transvaal Exploration Ompany had largely receded in price, the shares of the Transvaal Exploration Ompany had largely receded in price, the shares of the Transvaal Exploration Ompany and all argued the same properties. The company and at the rest of 10 pare the

would lend in the hope of being able to forecase, and the given property.

Mr. SMYTHE considered Prof. Heddel's report as very satisfactory. He believed the company possessed a valuable auriferous property, which would yield a good reward to the shareholders in future.

Mr. WAINWEIGHT thought the preliminary and other expenses were large, and not calculated to give confidence that the 50,0002, now asked for would be expended in an economical way.

Mr. Strews asked whether with a Bank rate of 2 per cent. the shareholders lid not consider the proposed 10 per cent. interest on the debentures too high?

Mr. Brayon asked whether steps were being taken to get in the arrears of calls?

The discussion was continued by Mr. MANNING, Mr. PARKER, and one or two

calls?

The discussion was continued by Mr. Manning, Mr. Parker, and one or two other gentlemen.

The Cualman, referring to the remarks of Mr. Middleman Middleman as surprised to see how frequently shareholders got up and made remarks, which could only have the result of damaging their own property. It seemed to him that Mr. Kiells's latter remarks answered his first, because his first remark that only fools would take the debentures conveyed the idea that the property was worthless, whereas in his second remark Mr. Kiell implied that people would take the debentures in the hope of being able to forciose and gain possession of a valuable property. On the other hand the remarks of Mr. Stevens implied that the property was of so valuable a character that 10 per cent. was too high an interest to offer on the debenture, and he believed that the great bulk of the shareholders would share the opinion of Mr. Stell. As regarded the charge of mismangement he did not take the censure either to his colleagues or himself, being satisfied that the board had, in the face of great difficulties, expended the money judiciously, and in a manner which would rapidly prove the value for otherwise of the property. As regarded the Chodon expenses the greater part was for telegrams, the salaries and office expenses being kept exceedingly small. As to the directors less he said he himself had received about 60, for fees since the company had started and his odirectors had received rather less than that amount. As to the small arrears of calls the directors were seeing that steps were taken to get them paid.

The resolution was then put and carried with only three dissentients. It may

As to the small arrears of caus the directors were seeing that steps were to get them paid.

The resolution was then put and carried with only three dissentients. It be mentioned that one of the dissentients was a gentleman who had previbeen refused a hearing by the meeting, because he declined to give his rout stated that he was a shareholder—a statement which was received evident increduity by a large number of gentlemen in the meeting.

A vote of thanks to the Chairman closed the proceedings.

### KAPANGA GOLD MINING COMPANY OF NEW ZEALAND.

WHEAL JANE.—At the meeting on Sept. 5 (Mr. J. C. Daubuz in the chair) Capt. R. Southey in concluding his report upon the operations at the mine said:—It will be seen by my report, also our sampling-book will show the produces of tin from the lodes are exceedingly low; the water charges are very heavy, this, coupled with the low price for tin, I do not hesitate to asy that if operations are to be continued below the adit level continuous and heavy calls will have to be made on the pockets of the shareholders.—Capt. Rich reports:—I have carefully looked through the operations in the back of the adit, the lode in the shallower parts of the mine has a much more promising appearance than in depth, and is deserving of further trial. There is a great extent of lode opened out above the adit level, but if it is to be made to pay working expenses the lodestuff must be broken and treated cheaply, which can be done with the appliances now on the mine. I consider there is little or no chance of making fresh discoveries by following the lode deeper, and should advise that the pitwork be withdrawn, and then confine the operations to a vigorous working of this large lode above the adit level; this would save the heavy pumping charges now going on, which are involving the shareholders in a great loss, without being of the slightest benefit to the mineral lords, but by scarching up and working the lodes above the adit level, there are fair chances of success, and if so, it would be benefitial allke to all interested. Several large shareholders having intimated that they are unwilling any longer to carry on the mine at a continuous loss, it was resolved that the deeper workings of the mine be discontinued, and that the engines, pitwork, and other materials be offered to the lords at a valuation, to be made in the usual way, and that the seneting stand adjourned till Friday, Sept. 26, at half-past twelve o'clock, p. M., to confirm this resolution or otherwise and for the transaction of any other business.

ANGLO-AMERICAN ENTERPRISE .- It is understood that General ANGLO-AMERICAN ENTERPRISE.—It is understood that General Herman Haupt, whose name is well known as the pioneer in Europe of mechanical rock-drilling, has just left St. Paul, Minnesota, with his wife and daughter, in order to place in the English market bonds for the Dakota and Great Southern railroad, a line which is of paramount interest to the mining community, owing to the rich mineral region which it will serve. General Haupt will also take the necessary steps whilst in Europe to secure the energetic development of a valuable Virginian property more than 100,000 acres in extent

#### PROVINCIAL STOCK AND SHARE MARKETS.

PROVINCIAL STOCK AND SHARE MARKETS.

CORNISH MINE SHARE MARKET.—Mr. S. J. DAVEY, mine share-dealer, Redruth (Sept. 11), writes:—Our market has been quiet all the week and prices have not changed very much. Cook's Kitchens have improved. Dolcoaths close %lower. Very little doing to-day. Subjoined are the closing quotations:—Carn Brea, 3½ to 3½; cook's Kitchen, 10 to 11; Dolcoath, 72 to 73; East Pool, 40 to 41; Killifreth, ½ to ½; New Cook's Kitchen, 1 to 1½; New Kitty, 1½ to 1½; Feden-an-drea, ¾ to ½; New Cook's Kitchen, 1 to 1½; New Kitty, 1½ to 1½; Peden-an-drea, ¾ to ½; New Cook's Kitchen, 1 to 1½; New Kitty, 1½ to 1½; Eden-an-drea, ¾ to ½; South Wheal Frances, 6¾ to 7½; Thoroft, 7½ to 8; West Hasset, 2½ to 3; Wost Hrances, 5½ to 5½; West Kitty, 10 to 10½; West Wheal Seton, 3½ to 4; Wheal Agar, 16½ to 16½; Wheal Masset, 2½ to 3; Wheal Grenville, 6 to 6½; Wheal Kitty, ½ to 16½; Wheal Masset, 2½ to 3; Wheal Grenville, 6 to 6½; Wheal Kitty, ½ to 1½; Wheal Masset, 2½ to 3; Wheal Grenville, 6 to 6½; Wheal Kitty, ½ to 1½; Cook's Kitchen, 10 to 11; Dolcoath, 72½ to 72½; East Blue Hills, ½ to 3½; Cook's Kitchen, 10 to 11; Dolcoath, 72½ to 72½; East Blue Hills, ½ to 3½; South Condurow, 8½ to 9; South Kitty, ½ to 1½; Polberro, 1½ to 2; South Condurow, 8½ to 9; South Kitty, ½ to 1½; South Condurow, 8½ to 9; South Kitty, ½ to 1½; South Condurow, 8½ to 9; South Kitty, ½ to 2½; Wheal Easset, 2½ to 3; West Kitty, 10 to 10½; Wheal Passet, 2½ to 2½; Wheal Crenville, 6 to 6½; Wheal Kitty, 10 to 10½; Wheat Peevor, ½ to ½; Wheal Quotath, 72 to 72½; East Hole, 10½; Wheal Peevor, ½ to ½; Wheal Crenville, 6 to 6½; Wheal Kitty, ½ to ½; Wheal Peevor, ½ to ½; South Condurow, 8½ to 8½; Wheal Everor, ½ to 8½; South Condurow, 8½ to

South Condurrow, 8% to 9½; South Crofty, 2½ to 3; South Frances, 5½ to 5½; West Edecton, 3 to 4; Wheal Rases, 2½ to 2½; Wheal Bessee, 2½ to 2½; Wheal

"bears" shows no signs of relaxing however. Americans, market lifeless, but prices show no great alterations. Mexican Rails neglected. Traffic, 58004. decrease, fall on the week ½ to ½.

SCOTCH MINING AND INDUSTRIAL COMPANIES

SCOTCH MINING AND INDUSTRIAL COMPANIES

SHARE MARKETS.

STIRLING.—Mr. J. GRANT MACLEAN, stockbroker and ironbroker (Sept. 11), writes:—Since last report (Aug. 28) the market has been quiet. The Board of Trade Returns, just issued, show a very contracted state of trade and a serious depression in prices; but, possibly, the beneficial effect of the good harvest will be shown later on. The money market remains easy. Fortnighty settlement will be on Sept. 28.

In shares of coal, iron, and steel companies there is no particular alteration to notice. Cardiff and Swanses are at 42s. 6d. to 47s. 6d; Marbellas, 52s. to 53s. Moss Bays are offered at 12½, and West Cumberland, 4½ to 5.

In shares of foreign copper and lead concerns prices are generally lower, owing to the dull state of the copper market. Tharsis declined to 6d. 3s. 6d., but are now firmer. Arisonas are 21s. 3d. to 23s. 9d.; Bratsbergs, 25s. to 30s.; Canadisn, 2s. 6d. to 3s.; Taunus Silver-lead (preference), 2s.; Tocopilla, 2s. 6d. to 5s.; and Yorke Feninsula (preference), 2s. 6d. to 3s. 9d.

In shares of home mines business has been quiet. Thin shares are in best demand, and the market for that metal is inclined to improve. Glasgow Caradon touched 12s. 6d., but are now back to 8s. Anderton are at 10s. to 12s.; Bedford United, 25s. to 30s.; Cooks Kitchen, 9½ to 10½; Camborne Vean, 3s. to 5s.; Great Laxey, 9 to 9½; Killifreth, 6s. to 8s.; Leadhills, 27s. 6d. to 38s. 6d.; Mounts Bay, 2s. to 3s. i. New Kitty, 32s. 6d. to 37s. 6d.; North Busy, 1s. to 2s.; Prince of Wales, 9s. to 11s.; St. Just United, 4 to 5; South Darren, 3s. 9d. to 18s.; St. Just United, 2s. to 4s.; Wheal Jane, 9d.; and Wheal Kitty, 12s. 6d. to 15s.

In shares of gold and silver mines prices are steady. Montanas are selling from 38s. 9d. to 14s.; St. Just United, 2s. to

Block, 40s. to 50s.; Lisbon-Berlyn, 9s. to 11s.; Last Chance, 1s. to 2s.; Mysore, 9s. to 11s.; New Emms, 2s. 4d. to 11s. 3d.; New Potosi, 7s. 6d. to 10s.; Organos, 8s. to 10s.; Oscar, 15s. to 17s.; Spitzkop, 10s. to 12s. 6d.; Sutro Tunnel, 1s. 1d.; Transval, 17s. 6d. to 22s. 6d.; Vitotria, 5s. to 7s.; West Callao, 2s. to 3s.; and Yuba River, 3s. 3d.

In shares of local and miscellaneous companies the principal feature has been an improvement in the cheap Oil shares, such as Lanarks and Midlothians, as their prospects are now viewed more favourably. The London and Glasgow Engineering Company dividend will be 5 per cent. Elmore and Company (Debentures) are 48; Halkyn Drainage, 7%; Homes Mines Trust, 17s. 6d. to 20s.; Lawes' Chemicais, 5% to 5%; Nobel's Explosives declined from 15% to 14%, but are now about 15.

EDINBURGH.—Messrs. THOS. MILLER and Sons, stock and share brokers, Princes-street (Sept. 10), write:—Several Scotch railway ordinary stocks have advanced since last report, particularly Great North, which has advanced since Wednesday last week from 50½ to 52½. Caledonian has risen from 101½ to 101½, North British from 99½ to 100¾, and Edinburgh and Glasgow from 38¾ to 37¾. Preference atocks have continued in demand, and many of them have risen in market value. Bank stocks have been in fair request. Bank of Sectland has improved from 320 to 323, Caledonian from 34s. to 55s., Clydesdale from 21½ to 21½, Commercial from 53½ to 54½, National from 30s to 508, Royal from 21½ to 220, Union from 21½ to 22. Prairie Cattle shares have all declined, the First from 6¾ to 5½, Liberty Brewn 120½, to 21s. 30, have recovered to 22s. 8d. The Second issue have fallen from 23s. to 21s. 36, have recovered to 22s. 8d. The Second issue have fallen from 25s. to 20s. 6d. A considerable business has been done in oil shares. Burntishand have fallen from 18½ to 18½6. Lanker from 87s. 6d. to 86s. 6d., Oakbank from 30s. to 29s. Pumpherston from 11½6 to 101½6. Linlithgow Oils shares have changed bands at 15s. premium.

### Mining Correspondence.

### BRITISH MINES.

BEDFORD UNITED.—H. Trezise, Sept. 9: There is no particular change in any of the tutwork or tribute bargains since last week's report. except in the winze sinking below the 42 cast of shaft, where the lode is 3 ft. wide, and worth 10/l per fathom, and likely to improve. This is evidently the continuation of the shoot of ore we had in the upper levels, it contains the richest and best quality are that I have seen since I have been in the mine, and as it is likely to continue in depth it will no doubt prove to be a good and lasting thing. The work throughout the mine is progressing satisfactority.

CARN CAMBORNE.—W. C. Vivian, Sept. 11: In the 105 we have commenced rising against the winze under the 95, and I am glad to say are breaking some rich copper ore. We calculate that we have about 12 ft. to rise and sink to effect the communication between the two points referred to, and the improvement in the productiveness of the lode gives us as an encouraging prospect for afterwards opening out the lode westward to the central cross-course. In the winze the water interferes with rapid sinking; but after the communication between this and the 105 has been effected, we shall be in a much better position for the further development of the lode.

OATHEDRAL CONSOLS.—S. Davey, Sept. 9: The cross-cut still continues to be very wet, and we have to-day met with another small branch, which is letting out a quantity of water. We have not as yet found the lode at the 50, but from the indication of to-day, I do not think we shall be long; the ground is of a congenial nature for the production of mineral.

this and the 105 has been offected, we shall be in a much better position for the forther development of the look.

In the territory of the look. The consecut still continues to be very wet, and we have to-day met with another small branch, which is letting out a quantity of vater. We have not at yet found the lode at the 50. It is not to be very wet, and we have to-day met with another small branch, which is letting out a quantity of vater. We have not at yet found the lode at the 50. It is not not considered the long of the production of mineral.

CREIGIOG.—H. Hotchkins. Sept. 10: I have no important change to report from this mine to-day. The lode in the case at all well decided, and letting out in the control of the control of

river waker to supply our various requirements. It is said to be 40 years since this reservoir was cleared.

GAWTON.—G. Rowe, Sept. 2: The lode in the 117 east is looking very promising, and yielding 3 tons of arsenical mundic per fathom, and intermixed with a little copper ore. No. 1 stope in the back of the 117 east is yielding 7 tons of arsenical mundic per fathom. No. 2 stope in the back of the ame level is yielding 6 tons of mundic and ore per fathom. The lode in the 95 cast is 7 lt. wide composed of capel and arsenical mundic, and yielding 9 tons per fathom. The stope in the back of the 82 east is yielding 9 tons of mundic per fathom. The stope in the back of the 70 seat will yield 7 tons of arsenical mundic per fathom. The stope in the back of the 82 east will yield 7 tons of arsenical mundic per fathom. The stope in the back of the 8 same level, west of shaft, will yield 9 tons of

resoled musile set fathom,
GLASGOW CARADON CONSOLS.—W. Taylor, W. J. Taylor,
ave not reached the south lode on the 126 cross-cut, the ground winzes bottom of 114 is rather south. This position, however, is more invourable for the lode being productive; we are publishing this on as fast as passible. The cross-cat is hardly sufficiently advanced to commence opening on Harvey's at this level, hope to do so after enother week. The winzes and stopes is bottom of 114 on Harvey's lode are looking very well, varying in value from 124 to 154, per fathom. The winze sunk on the north part of south lode, bottom of 114, is worth 54, per fathom. We are expecting this daily to fail in with the main part, when we shall have a more valuable lode. We have discovered some good ore ground in a tribute pitch on south branch, back of this level, apparently standing whole for a considerable length. We have commenced to open the 114 level on it, and hope soon to get the same run of ore, now worth about 54. per fathom; we hope this will turn out of some importance.

GOODEVERE.—R. Knott, Sept. 11: The appearances of the lode on the winze sinking below the shallow addit level are much the same as reported last weak—lode about 5 ft. wide, and producing good work for tin. This is the best lode we have ever seen in the mine, which of itself is a good evidence of your soon laying open a remunerative property.

lode we have eyer seen in the mine, which of itself is a good evidence of your soon laying open a remunerative property.

GREAT HOLWAY.—W. T. Harris, Sept. 11: Level Engine-shaft; The 60 level, No. 1 pitch is back, maintains the value last reported, 15 ton lead and 15 ton blende per fathom. No. 2 pitch were greated and 1 ton blende per fathom, and very promising for further improvement. No. 2 pitch is bottom of level, said and 2 tons blende per fathom. No. 5 pitch is worth 10 cwts. lead and 2 tons blende per fathom. No. 5 pitch is worth 10 cwts. lead and 2 tons blende per fathom. No. 5 pitch is worth 10 cwts. lead and 2 tons blende per fathom. No. 7 pitch is bottom of level, lead and 15 ton blende per fathom. No. 7 pitch is worth 5 cwts. lead and 15 ton blende per fathom. The same value applies to No. 2 pitch. No. 10 pitch is producing 10 cwts. lead and 15 ton blende per fathom. No. 2 pitch in bottom is worth 5 cwts. lead and 1 ton blende per fathom. No. 3 pitch, in lock of 50 level east, is vickling worth 5 cwts. lead and 1 ton blende per fathom. No. 3 pitch, in lock of 50 level east, is vickling worth 5 cwts. lead and 1 ton blende per fathom. No. 3 pitch, in lock of 50 level east, is vickling worth 5 cwts. lead and 1 ton blende per fathom. No. 3 pitch, in forefrees of level, is worth 5 cwts. lead and 1 ton blende per fathom. No. 3 pitch, in forefrees of level, is worth 5 cwts. lead and 1 ton blende per fathom. No. 3 pitch, in forefrees of level, is worth 5 cwts. lead and 1 ton blende per fathom. No. 5 pitch, in forefrees of level, is worth 5 cwts. lead and 1 ton blende per fathom. No. 5 pitch, in forefrees of level, is worth 5 cwts. lead and 1 ton blende per fathom. No. 5 pitch, in forefrees of level, is worth 5 cwts. lead and 1 ton blende per fathom. No. 5 pitch, in forefrees of level, is worth 5 cwts. lead and 1 ton blende per fathom. No. 5 pitch, in forefrees of level, is worth 5 cwts. lead and 1 ton blende per fathom. No. 5 pitch, in forefrees of level, is worth 5 cwts. lead and 1 ton blende per fathom. N

GREEN HURTH.—J. Polgiase, Sept. 4: The 44, north of Swan shaft, is worth 1½ ton per fathom. No. 1 stope is worth 2½ tons per fathom. No. 2 stope is worth 3 tons per fathom. No. 3 stope is worth 3 tons per fathom. No. 4 stope is worth 3 tons per fathom. No. 4 stope is worth 3 tons per fathom. No. 4 stope is worth 3 tons per fathom. No. 4 stope is worth 3 tons per fathom. So tons per fathom and the velocity of the 30 north is worth 1 ton per fathom. Signs of improvement in the velocity of the 30 north is worth 1 ton per fathom. Signs of improvement in the velocity of the 30 north is worth 1 ton per fathom. Signs of improvement in the velocity of the 30 north is worth 1 ton per fathom. Signs of improved the 40 north 1 n

was when last reported. So also is the 70 cond west. The lode is very much improved; now worth 76, per fathom for tin. Our other bargains are much the same as last reported.

KIT HILL GREAT CONSOLS,—Isaac Richards, Sept. 11: At the tunnel level we are still passing through the great lode recently intersected. The width reached is nearly 3 fms., and the composition and character of the lode is tolerably uniform throughout the whole distance—very fine capel and quartz, with a little mundic, blende, and traces of tin ore. The distance driven during the past month is 7 fms. 5 fs., making below the 100 fm. level, the lode continues to presents very fine appearance, and yields a little tin ore. The distance and the lode on times to presents very fine appearance, and yields a little tin ore. The distance and the lode is 5 ft. wide, composed of very fine appearance, and yields a little tin ore. The distance driven during the past month is 2 fms. 2 ft. 9 in. In the 100 fm. level, west the lode is 5 ft. wide, composed of very fine appearance, and the past month is 2 fms. 2 ft. 5 in. In the lof of melvel, west the lode is 5 ft. wide, composed of the 35 fm. level west the lode —4 ft. being carried—is composed of capel, quartz, peach, blende, mundic, and a little tin ore. The distance rises during the past month is 1 fm. 3 ft. 4 in. MELLANEAR.—John Gilbert, Sept. 10: The ground in the 70 cross cut, north of the main lode, east of Gundry's shaft, is a little harder for driving; but is still latting out some water, and presenting a kindly appearance. The lode in the 90, west of Gundry's shaft, on the south part has been disordered with cross-branches; it is now 3 ft. wide, and yielding 1½ ton of copper ore per fathom. The lode is 4 ft. wide, and yielding 1 ton of copper ore per fathom, and some saving work for tin, but very spare for driving. In the 110, east of shaft, the lode is 3 ft. wide, and yielding 1 ton of copper ore per fathom, and occasional stones of tin, and letting out a food deal of water. In the 123, seat of sh

MID-DEVON COPPER.—James Nelli, Sept. 5: A Shaft; We have at present plentiful supply of surface water, and the shaft is drained to within 3 ft. of a bottom of the 80. Machinery doing good duty.—C Shaft: The 50 stope in a lock of cross-cut north, worked by four men in two directions, east and west, here the strata is very promising, especially so in the latter point, having short the and friable garnet intermixed in large quantities; yields 1 ton per the father.

where the strata is very promising, especially so in the latter point, having chiorite and frishle garnet intermixed in large quantities; yields I ton per cibic lathom.

MOUNTS BAY CONSOLS.—T. Job, W. Argall, Sept. 6: We have six men sinking the Pengersick shaft from adit to the 20 level, at 5f. 5s, per fathom; now down a little over 12 fathoms. There are eight tribute pitches working at from 12s. to 15s. in lf. tribute; two of these pitches are looking very well. We shall sail our monthly parcel of tin in the coming week.

NEW CARADON.—N. Richards, Sept. 11: In driving the western cross-cut north of No. 1 lode, in the 50, we have intersected a branch about 10 in, wide, spotted with ore and mundic, and from its bearing no doubt it will fall into one of the lodes before us. There is no change to notice in the eastern cross-cut.

NEW KITTY.—Wr. Vivian, Sept. 11: No change to notice at any of the points of operation since the report last week.

NEW LANGFORD.—T. Gregory, Sept. 10: In the 10 fm. level, west of engine-shaft, the lode over 2½ ft. wide, composed of flookan, lead, blende, and low quality silver ore, reset to drive for the month at 2d. per fathom, and 10s. tribute. The lode in the 30 fm. level, west of engine-shaft, is 2 ft. wide, producing lead, blende, and a little copper ore of good quality, price for driving 35s, per fathom, and 10s. tribute. A more promising end cannot be seen without a course of mineral. Roberts' pitch is producing silver ore equal to 35 ozs, per ton, the branch at times being small then widening out again leads us to hope for a good deposit of silver. No. 2 pitch produces lead, blende, and silver ore equal to 20 ozs, per ton. This is a promising point, and ought to improve.

NEW TERRAS.—B. Eade, Sept. 11: We shall complete the apparatus for raising the water out of the new or eastern shaft the early part of the coming reek. The ground in it is of a most congenial character for the production of tin. It will lay open three different lodes. In several places going down below the dee

at least 100 heads of stamps. All other things going on an unial.

NORTH GREEN HURTH.—James Folglase, Sppf. 1: There is no particular, and the booth level during the week. The deep crussed is about an any appropriate the property.

PHENIX AND WEST PHENIX UNITED.—John Trusout, Sept. 11: Setting Report: Secombe's Shaft: To drive a cross-cut north at the 100, west of this shaft, at 150, per fathom, to accretain the value of the lode in this direction.—Did Sump Shaft: The 130 to drive west, at 121, per fathom: lode large, to this shaft, at 154, per fathom, to accretain the value of the lode in this direction.—Did Sump Shaft: The 130 to drive west, at 121, per fathom: The 100 to drive west, at 122, per fathom; lode producing a little tin. To strip out the north part of the lode at the 80, close to the present end, at 34. Iss, per fathom is deep resent end, at 34. Iss, per fathom side worth 102, per fathom. No. 1 stope in the back of this level, at 44. Per fathom; lode worth 105, per fathom is deep worth 105, per fathom. The 100 to drive west, at 120, per fathom are presented to the stope in the back of this level, at 24. Iss, per fathom; lode worth 104, per fathom. No. 1 stope in the back of this level, at 24. Iss, per fathom; lode worth 105, per fathom. No. 1 stope in the back of this level, at 24. Iss, per fathom; lode worth 105, per fathom. No. 1 stope in the back of this level, at 24. Iss, per fathom; lode worth 105, per fathom; lode large, but unproductive. The 70 to drive west, at 122, per fathom; lode large, but unproductive. The 70 to drive west, at 122, per fathom; lode large, but unproductive. The 70 to drive west, at 122, per fathom; lode worth 105, per fathom; lode worth 105

ascertain when the lode will again be taken down, and at once write to a see it again for you. I also find in the stope behind this end a good-looks see it again for you. I also find in the stope behind this end a good-look to yielding good tin work, which I anticipate will improve as the end is a forward, and the stoping carried on in this direction. I also recommend as well as in my former reports to you that the mine be sunk, and deep opened up, and from my experience and knowledge of the mine I have opened up, and from my experience and knowledge of the mine I have opened up, and from my experience and knowledge of the mine I have opened up, and from the mining property.

PRINOE OF WALES.—S. Roberts, Sept. 10: In the 102 cast we have taking down the lode, which is filly 4 ft. wide, producing rich copper on worth 50!, per fathom for tin, with an appearance of permanency. The being hard, and much water issuing from it, prevents making peed in each in the lode; consequently, in order to expedite the driving as much as pear in the lode; consequently, in order to expedite the driving as much as pear in the lode; consequently, in order to expedite the driving as much as pear in the lode; consequently, in order to expedite the driving as much as pear in the lode; consequently, in order to expedite the driving as much as pear in the lode; consequently, in order to expedite the driving as much as pear in the lode; consequently, in order to expedite the driving as much as pear in the lode; consequently, in order to expedite the driving as much as pear in the lode; consequently, in order to expedite the driving as much as pear in the lode; consequently, in order to expedite the driving as much as pear in the lode; consequently, in order to expedite the driving as much as pear in the lode; consequently, in order to expedite the driving as much as pear to be the lode, and the lode of the lode or the lode or the lode of the lode or the lo

day. We have sold 100 tons of lead ore for 632. 103. Next week we sample lead ore and blende.

RUSSELL UNITED.—John Bray, Sept. 11: I have nothing new to repe a she lead or each blende.

RUSSELL UNITED.—John Bray, Sept. 10: I beg to hand you the fells report of our setting on Saturday last:—Rule's Shaft: To rise in back of 210 on Holman's lode by six men, at 10. 102, per fathom. The lode is 102 on Holman's lode by six men, at 10. 102, per fathom. The lode is 103 of on Holman's lode by six men, at 71. per fathom. The end has a men mising appearance than for some time past, and although not yet clear of disordered ground referred to in our last report, the change indicates an improvement. The winze from the 170 has been holed, and better remit thus secured. To drive the 170 east by four men, at 52; loda & present yielding the secure of the 180 east by four men, at 52; loda & present yielding in the aggregate 10 tons of ore per fathom. To drive the four men in each, one at 22. 102, two at 22. 52, and one at 12 yielding in the aggregate 10 tons of ore per fathom. To drive the four men in each, one at 23. 103, the lode here is a little emain present yielding 1% ton of ore per fathom. The ground continues favor and as soon as the rise is communicated with the level over the ead of better ventilated, when more men will be employed. To rise in back at the very leading 1 lons of ore per fathom. There is one for the back set to four men, at 21. 103, yielding 2% tons of ore 8 To drive the 150 east by four men, at 10.; lode yielding 2 lons of ore per fathom. There is one to the 102 of the 10

rom 12s. to 13s. 4d. in 1f. We have sampled, for sale on Sept. 18 ons of copper ore.

SOUTH CONDURROW.—Wm. Rich, W. Williams, H. King, ode in the back of the 20, west of engine-shaft, is worth 7f. per 50 end west yields low quality tinstone. The 40 end east is worth 7f. set of the 1st of the 1st

is worth 10% per fathom. The stope in the bottom of the 73, east of Manhar, shaft, is worth 10% per fathom. There is no improvement in the ends driving yet a speak of.

SOUTH DAREEN.—John Mitchell, Sept. 11: We have been driving by a side of the lode in the 130 for the past week, and the little we have foright the side proves it to be going on good in the forebreast. We are again driving the 130 end east, but have not yet sufficient lead to value. The little we have being being worked are worth together 4% tons of silver-lead ore per fathom. It work is going on satisfactorily, and we have a good supply of water.

SOUTH DEVON.—W. Hooper, Sept. 10: Setting Report: The increase surface water in the past week is not sufficient to enable us to resume the silving of Martin's shafe. No time shall be lost in doing so at once we get at supply, so as to get down to the 130 fm. level. I look upon this as very portant point, from the fact of having driven through a good lofe is the lives of 19 fms. In length, and a most promising lode in the end. Wahas every reason to expect to find it equally good in the 130. The 120 happond to be of greater value than the 110 over this point, and I have no doubt a deat is attained the lode will prove to be very productive. The 120, west of surface its regular course, but I am pleased to say we have to day interacted the lode will remove to the very productive. The 120, west of surface for the west of it full 4 ft. wide, containing apar and copper ore to a rain side is regular course, but I am pleased to say we have to day interacted the lot of the west wo stopes working in the back of this level, No, is is four men at 24. 5a, per fathom; lode, 4 ft. wide, worth 144, per fathom. It is set to four men at 2. 10s, per fathom; lode, 3 ft. wide, with a value of its of the west of it full 4 ft. wide, containing apar and copper ore to a rain side of fitto, to two men at 13a, 4d, in 11. to pay all cost connected with it. We have pitches at work by 13 men, and I hope in a short time to set more. B

and. The lode in the rise spanish such a consideration. We are making satisfactory progress in sinking the new shift, as alsing stone for water-wheel, &c. We have had a little rain during the part of the consideration o

the stroke, and by this means we hope to keep in working order. Other sakinery working satisfactorily.

TREVAUNANCE UNITED.—W. Vivian, Sept. 11: We have nies men citize down the engine-shaft from surface, making it 11 ft. by 6 ft. We have six ma driving west at the 55, and have to deive about 6 fms. to get under the table, from where I purpose to rise against the shaft. We have purchased a god 50-in. engine, and are now engaged taking out ground for the engine-shess. No time will be lost in getting up the house and putting in the engine-shess. No time will be lost in getting up the house and putting in the engine-shess. It is the first own of the engine shess. The same sheet is no change in the 80 west as we are driving by the side of the lode, and no lode has been taken down for the week.

WEST KITTY.—Wm. Vivian, Sept. 11: In the 34, driving east, the lode is worth 154, per fathom. In the 72, driving east, the lode is worth 154, per fathom. In the 75, driving east of cross-out, the lode is worth 154, per fathom. In the 10, driving east of cross-out, the lode is worth 154, per fathom. In the 50, driving east of cross-out, the lode is worth 154, per fathom. In the 50, driving east of ross-out, the lode is worth 154, per fathom. In the 50, driving east of cross-out, the lode is worth 154, per fathom. In the 50, driving east of cross-out, the lode is worth 154, per fathom. In the 50, driving east of cross-out, the lode is worth 154, per fathom. In the 50, driving east of cross-out, the lode is worth 154, per fathom. In the 50, driving east of cross-out, the lode is worth 154, per fathom to Driving east of No. 2 rise, the lode is worth 154, per fathom. In the 50, driving east of cross-out, the lode is worth 154, per fathom to the such that the control is worth 154. Per fathom to the such the control is worth 154. Per fathom to the such the control is worth 154. Per fathom to the such the control is worth 154. Per fathom to the such the control is worth 154. Per fathom to the control is worth 154. Per fathom to the

WEST PATELEY BRIDGE.—David Williams, Sept. 11: East Graning in: to have two drivages upon the course of the lode at the 37; in the east of the WEST PATELEX BRIDGE.—David Williams, Sept. 11. the est We have two drivages upon the course of the lode at the 37; in the est vein is 2 ft, wide, filled with spar and gossan, and intermixed with riseless of lead ore; in the west end the vein is 13 ft, wide, between well-defined the sept. The sep

dressing.

WEST PHCENIX.—W. Biob, R. Gluyas, Sept. 9: We have fixed double skip coad in Norris's engine-shaft, and have begun to drive east and west on the course of the lode at the 70. The lode in the last few fathoms similing of the engine-shaft has taken a direction nearer the perpendicular. We consider this engine-shaft has taken a direction nearer the perpendicular. We consider this a favourable indication: the lode at the deepest part has certainty a most graining appearance. We intend to urge on the sinking of the engine-shaft soon as the ends east and west are driven a few fathoms. The ground in the 3 west is much easier for driving; the lode is of good width, regisler, and well-defined, and looks likely to improve.

WEST POLBREEN.—Wm. Vivian, Sept. 11: We are pushing on the sinking of the engine-shaft below the 50 with all speed, now that is infection water. I hope to get it down to the add level before the winter gets in.

WHEAL BENNY.—Thomas Cocking, Sept. 11: Our pumping-whel accompleted, all the launders are fixed. The bob erected at the mouth of dear addit level. We are now bustly engaged putting in the line of rost thought to dear the mouth of dear addit level. We are now bustly engaged putting in the line of rost thought to dear the mouth of the dear the mouth of the dear the second person of th

INEO

SEPI

We ca

the repo tin he to to the to found a

At E

ships

Quant

1884

ships are tenable at the College.

se lode in the ends and stopes still maintains its size and value, varying from to \$1 ft. wide, and yielding fair stamping work for tin. On Tuesday last we lot \$1 ft. wide, and yielding fair stamping work for tin. On Tuesday last we size a fair transpare that the stamps wheel, we shall then be in a position to be able made much greater returns. The machinery is all in perfect working order. The transparent was the much greater returns. The machinery is all in perfect working order. The lode in the 144 fiving west of new shaft will yield 7 tons of mundic per fring ast of new shaft will yield 4 fiving west of new shaft will yield 7 tons of share or the stope in back of the perfect of the stope in back of this level will yield 3 tons of copper ore and 2 tons of copper ore and 2 tons of copper ore shown. The stope in back of this level will yield 3 tons of copper or the stope of mundic per fathom. The lode in the winze ainking below the 48, and 2 tons of mundic per fathom. The lode in the winze ainking below the 48, and 2 tons of mundic per fathom. The stope in back of this level end 2 tons of mundic per fathom. The stope in back of this level, east of new shaft, will yield 4 tons of copper re and 4 tons of mundic per fathom. There is nothing to call for any special enter in any other part of the mine.

### WATSON BROTHERS MINING CIRCULAR.

WATSON BROTHERS, IINEOWNERS, STOCK AND SHAKE DEALERS, 1, ST MICHAEL'S ALLEY CORNHILL, LONDON

The agent completed taking down the lode at the 102 east at rince of Wales on Friday, and started to drive by the side of the ode again on Saturday. Up to the end of the taking down it coninued worth 50*l*, per fathom. The agent wrote us on the 5th, "We have a splendid lode in the 102 east, 4 ft. wide, worth fully 50*l*, per thom for tin and copper. I have not seen so rich an end for tin agent wars."

We may explain in regard to driving by side of lode that this has it ways been done as a saving of time and money. The lode is so and that to drive upon it would cost, perhaps, double the money and more time than it takes to drive in the soft country, then cut brough and take down the lode at certain distances.

hrough and take down the lode at certain distances.

The latest report of the mine, dated the 10th, the agent states, \*In the 102 east we have finished taking down the lode which is fally 4 th. wide, producing rich copper ore, and worth 50th per fm. for tin, with the appearance of permanency. The lode being hard and much water issuing from it prevents making speed in driving in the lode, consequently in order to expedite the driving as much as possible I put men to get further by its side."

We cannot answer all the questions in regard to The New Cara-ion this week; will endeavour to do so next.

ion this week; will endeavour to do so next.

Since the above was written a large shareholder has had Prince of Wales inspected by an independent agent, and has sent us a copy of the report, which fully confirms the agent's (Capt. Roberts), as to the value of the discovery in the 102 east. Capt. Knott assayed the tin he took from the lode on the 9th, and it gave a produce of 6 cwts. to the ton of stuff, and a value of at least 50%. per fathom. He also found a stope behind this end yielding good tin work, which he anticipates will improve as it is carried on towards the discovery in the end. He also recommends sinking the shaft, and from his experience and knowledge of the mine has great confidence in it as a tin mine.

As we said last week, it was unanimously resolved at the last

and knowledge of the mine has great confidence in it as a tin mine.

As we said last week, it was unanimously resolved at the last
meeting of shareholders, in order to reduce costs, to confine operations to the 90 west and the 102 east as pioneer levels. If this discovery continues, as at present there is every probability, the mine
will soon pay costs, and make profits, and the shaft will of course be
sank to another level. At present there is 1l. 10s. paid on the shares,
and a small call, when all the arrears are got in, would clear the mine
of all debts, and give it a fair start towards dividends.

At East Blue Hills there has been no water for the stamps of late, but the agents hope to sell 2 or 3 tons next week. The tinstuff is accumulating on the mine, and they hope to draw 100 tons of stuff a week; so that during the winter months there will be plenty for the stamps to work upon.

Bristol University College.—In the Chemical Department during the session to commence on Oct. 7 lectures and classes will be given in all the branches of theoretical chemistry, and instruction is given daily in the Chemical Laboratory. Excursions to some of the mines, manufactories, and chemical works of the neighbourhood are occasionally made. The department of experimental physics includes various courses of lectures arranged progressively, and practical instruction is given in the Physical and Electrical Laboratory. The department of engineering and the constructive professions is designed to afford a thorough scientific education to students intending to become engineers, or to enter any of the allied professions, and to supplement the ordinary professional training by systematic technical teaching. This department includes courses specially arranged for students intending to become civil, mechanical, or electric engineers, surveyors, or architects. Those who nical, or electric engineers, surveyors, or architects. Those who attend the mechanical engineering course enter engineering works laring the six summer months, and in accordance with this scheme during the six summer months, and in accordance with this scheme various manufacturing engineers in the neighbourhood have consented to receive students of the College into their offices and workshops as articled pupils. The Engineering Laboratory has recently been provided with a powerful testing machine, and instruction in the use of tools is given in the workshop. Special courses in surveying have been arranged, and excursions for field practice are frequently made. The department of geology, biology, and zoology include various courses of lectures in all the branches of this subject, together with laboratory instruction. In the Botanical Department practical instruction is given by means of the Botanical Gardens, which contains upwards of 1000 specimens. Courses of lectures, and classes are given in mathematics, political economy, logic, moral philosophy, modern history, English literature, Greek, Latin, Hebrew, French, and German. Medical education is provided by the Bristol Medical School, which is affiliated to the College. Several scholarships are tenable at the College.

				Tons.	Mellous,
chen., 35 £4	New Cook's Kitcher	6	£1 16	78	Mellanear
35 5 1	South Tolcarne			76	
34 2	ditto	6		74	ditto
34 2 27 3 25 3	ditto	6	2 4	70	ditto
25 3	West Seton		2 0	69	ditto
	ditto	6	2 15	59	ditto
	ditto	6	2 17	56	ditto
29 4	Wheal Coates	6	1 9	55	ditto
13 1 1	ditto	0	2 6	54	ditto
20 2	Camborne Vean	6	3 5	41	ditto
10 5 1	ditto	6	2 0	Kitchen., 53	iew Cook's Kitch
AV W I	4440	6	3 16	40	ditto
	RODUCE	G P	TOTAL		
on 47 P 150 1	1 307 and 307 hand 101-6 and	0.1	202 10	639 F1	Mellanear
39 117	Camborne Vean	6	363 15	Arne 97	south Tolcarne
on 47£ 15	Camborne Vean	6 6 6 0 0 6	1 5 2 0 3 16 TOTAL 383 10 415 4 363 15	Kitchen. 53 40 632 £1 Kit 128 arne 97	New Cook's Kitch ditto  Mellanear New Cook's Kit South Tolcarne

orandard of corresponding sale last mouth,	£ 80 10   P	rodu	ce,	13%
COMPANIES BY WHOM THE ORES V		HASI	ED.	
vivian and Sons	021	666	19	0
		605	9	3
		419		0
Williams, Foster, and Co Elliott's Metal Company	24058	532 366		9
	140	300	10	0
Total	985	2501	19	0

Last SALE.—Average standard, £ 88 12 0 | Average pro-

Copper Ores for sale at the Royal Hotel, Truro, on Thursday next.—Min parcels.—Devon Great Consols 200—South Caradon 300—South Devon 1300—Bedford United 190—Gunnislake (Clitters) 151—Calstock and Dance 136—Holmbush 190—Devon Great United 99—West Caradon 55—Gawto Total, 2293 tons.

RAMWAYS.—The closing prices of this evening, as quoted by Mr. Annors, of Tokenhouse-yard, are given in tabular form in the last page of

ESTABLISHED 1871

### LEWIS &

MINING OFFICES: BARTHOLOMEW HOUSE, BARTHOLOMEW LANE, LONDON; and 157, ST. VINCENT STREET, GLASGOW.

Advise and Report on all Classes of Mines, Home and Foreign, Execute Orders and Advise the Purchase or Sale of Mining Securities.

September, 1884: During the past month the Mining Market has been, as is usually the case in August, in a very apathetic condition.

Towards the close of the month, however, business was more active, and in another month will be earning a large profit. Three rand shrewd mining investors appear to be picking up shares in sound well-managed mines likely to advance in price with the slightest rise in the price of metals.

GOLD.—Shares in Transvanl Gold Mines have been all dull, and the tendency in price is downward. We warned clients to be careful.

"market mine" the shares of £1 each would now stand at £2 each, and "market mine" the shares of £1 each would now stand at £2 each, and "market mine" the shares of £1 each would now stand at £2 each, and "market mine" the shares of £1 each would now stand at £2 each, and "market mine" the shares of £1 each would now stand at £2 each, and "market mine" the shares of £1 each would now stand at £2 each, and "market mine" the shares of £1 each would now stand at £2 each, and in another month will be earning a large profit. Three cost, and in another month will be earning a large profit. Three cost, and in another month will be earning a large profit. Three cost, and in another month will be earning a large profit. Three cost, and in another month will be earning a large profit. Three cost, and in another month will be earning a large profit. Three cost, and in another month will be earning a large profit. Three cost, and in another month will be earning a large profit. Three cost, and in another month will be earning a large profit. Three cost, and in another month will be earning a large profit. Three cost, and in another month will be earning a large profit. Three cost, and in another month will be earning a large profit. Three cost, and in another month will be earning a large profit. Three cost, and in another month will be earning a large profit. Three cost, and in another month will be earning a large profit. Three cost, and in another month will be earning a large p

slightest rise in the price of metals.

GOLD.—Shares in Transvaal Gold Mines have been all dull, and the tendency in price is downward. We warned clients to be careful in the selection of these stocks, and when Transvaal Gold stood at a high premium we were hardly credited when we stated that the 10,000 tons of gold quartz said to be ready at surface for the stamps, and containing 2 to 3 czs. of gold to the ton, was the accumulation of years, and that when treated the company might expect "chaos." The company, however, now appear to be alive to the fact that their stamps are useless, and that water is the power required to work the Transvaal Gold Fields. LISBON-BERLYN shares are decidedly weak. Reports are conflicting; our private advices are favourable. TRANSVAAL SYNDICATE shares may be worth buying. The "boss" is an old Californian and Colorado miner. His present scheme looks like business. MYSORE GOLD.—Of all the Indian gold companies the Mysore is the only one showing prospects of success as a mine, and we cannot but admire the pluck and perseverance of the board and managers in holding on to Captain Plummer in face of the adverse criticisms showered upon the Colar district some two years since. MONTANA.—Various rumours are circulated in reference to this mine. With all due deference to the management, the one rumour we should like to see authenticated in the interests of the shareholders is, that a first-class American mining engineer was called in to the assistance of the gentleman in charge. The one selected should thoroughly understand complex ores and their proper treatment.—CALIFORNIA: We mean the State of California, and not the mine of that name. To use an Americanism, one of the greatest "booms" in gold mining is just beginning in California, and will probably reach fever heat towards the close of 1885. We have always been with those who held that California is still the richest gold field of the world, owing to the amount of buried treasure in the "blue-lead" of the old Pliocene rivers. Since 1848

of the world, owing to the amount of buried treasure in the "blue-lead" of the old Pliocene rivers. Since 1848 California has produced over £234,000,000 in gold, but large as this sum appears we are of opinion that ten times the amount is yet to be drawn by working the ancient river channels by "drifting." We have been the means,'of finding Scotch capital to prove this theory correct, and we shall have something important to say upon it very shortly.

SILVER.—Silver mine shares are dull. Advices from the United Mexican appear very favourable. NEW EMMA.—The mine is again in work, and shares are worth buying on the chance of the mine getting into "bonanza." If a "bonanza" be struck it is more likely to yield £1,000,000 than £100,000. With regard to the price of silver, although the price of the metal is fairly steady, we should not be surprised at a fall during the coming year. With the stoppage of silver coinage on the Continent, and the nearly certain repeal of the Bland Act in the United States, what will be the price of silver? To India the question will certainly prove a serious one, and the advent of bi-metallism appears further off than ever.

COPPER SHARES are dull. Notwithstanding the low price of copper we believe some copper companies' shares are below their value, and certainly Rio Tinto. The shares of the ARIZONA COPPER COMPANY (Edinburgh) are being pretty extensively dealt in. We see no reason to alter our good opinion of this mine if properly managed, and we believe the new board are going the right way to make returns. We look for a further fall in the price of the metal, and it is very likely to be brought about by the action of one man, an American. The Butte district of Montana is now the greatest copper-producing district in the United States. The largest mines are owned by one of the keenest mining speculators in America, and it appears to us that the game as played is to reduce largest mines are owned by one of the keenest mining speculators in America, and it appears to us that the game as played is to reduce the price of copper, so as to freeze out all smaller concerns and control the district. American copper has now a very sensible effect on prices, so we look for a reduction in the price of the metal, and then a rebound.

a rebound.

TIN.—The tin standards are down £2 per ton when prices ought to go up. Prices have not been much affected. Tin in DAKOTA is now the cry. Going down to Cornwall some three weeks ago, two gentlemen in the carriage were speaking on this identical subject. One of them, we afterwards found, was Mr. Frecheville, the Government Mining Inspector. We had some pleasure in informing them that Prof. Blake, one of the foremost geologists and mining engineers in the United States, had condemned nearly the whole district. This we reassert.

trict. This we reassert.

We call special attention to the shares of the Owen Vean and Tregurtha Downs Mines. We believe this to be the coming tin-producing mine of Cornwall, and we advise clients and investors not be the shares of the shares are the shares. to miss buying a few shares on any account. We believe the share to be worth  $\pounds 2$  intrinsically, and we have no doubt as to dividends.

to be worth £2 intrinsically, and we have no doubt as to dividends.

LEAD shares are nearly unsaleable, and hardly worth buying, unless the ore contains silver in appreciable quantities. The two mines named in our circular are worth buying at the prices quoted.

We have recently returned from a visit to Hony United, and Owen Vean, and Tregurtha Downs Mines, in Cornwall, the Shoreham Portland Cement Works, in Sussex, and the Penegarreg Silver-Lead Mine, in South Wales, and beg to submit a few notes.

HONY UNITED MINES.—The work at these mines is now exclusively centred on the lode in the eastern part of the sett, known as the Brockelbank lode. By many this lode is believed to be the true Trelawny lode, heaved or thrown to the east by the slide met with in the 108 level of the old mine. The Brockelbank lode has been

the true Tre'awny lode, heaved or thrown to the east by the slide met with in the 108 level of the old mine. The Brockelbank lode has been so often described it is here unnecessary to give details -suffice, however, to say it is from 2 to 5 ft. wide, of a strong, masterly character, but, more important still, of a very kindly and congenial nature for the production of silver-lead at a shallow depth. It has been traced at surface, and opened on the full length of its course between the Hony boundaries. South of the Hony boundary it appears to die out, but north of the Hony boundary it forms a junction with the small lode in Trewetha, on which we have evidently been working in the Hony ground. Further north still it is said to have made very rich in Butterdon Mine. A 26-in. engine, with boilers, engine and boiler house, &c., is erected, and a few further small attachments will enable the sinking to be carried below the adit level. With regard to the value and prospects of this lode, if the opinion With regard to the value and prospects of this lode, if the opinion of the district is of any weight, we are likely to have a rich mine. Our own opinion as to its future has never varied, and if the original plans and suggestions had been carried out we should now have a productive mine.

It is intended to sink the shaft in the Brockelbank lode down as far as the power of the 26-in. engine will allow—say, 40 fms., when it may be desirable to erect the 90-in. engine and sink a new shaft

The ore carries about an average of 40 ozs, of silver to the ton, and to show the richness of the silver-lead produced in this famous district, we give herewith an extract from the Mining World, of July 19, 1884:—

"Lead Ore—Cornwall—Total produce: 880 tons dressed ore; 587 tons 19 cwts. lead; 9445 ozs. silver; value of ore at mine, £7945 At Wheal Hony and Trelawny 57 tons of ore produced no less than 42 tons of lead of £506 value."

We have strong hopes the Hony United Mining Company will yet become the leading silver-lead producing mine of Cornwall. The tully-paid shares of £1 each are a first-class speculation at 5s., and should be purchased.

OWEN VEAN AND TREGURTHA DOWNS MINES. What can we write about these mines that will do them justice?

What can we write about these mines that will do them justice? In two years they have been drained to the deepest level, sunkanother

or 100 per cent. premium, and at that price they would be cheap.
Judging from the way mining shares are valued great prospects are
before the company. The sales of tin ore made since we commenced before the company. The crushing are as follows:-

-	d by cap-	1883. Oct. 25	Tons.	cwt.		1bs. 20		£ 238	s. 19	d.	£	я,	d.
	En de by	Dec. 19 1884.		8				70		6			
ł	work and shing instu	Jan. 15	1	10	2	8		73	6	6			
1	stamp ), work sel and prushin tinstu	Feb. 14		15	2	6		85	18	6			
	nr stamp yle), wor wheel an f crushin of tinst	March 1		13	3	4		81	1	6			
1	of of	April 10	) 1	5	1	25	***	61	2	6			
1	for series	May 9		10	0	9		73	17	6			
1	# Plan	July 4	2	6	1	3		107	17	6			
	From four sta (old style), v waterwheel able of crus 1 ton of ti 24 hours.	(								_	792	12	0
-		)											
1	ty co	Aug. 2	10	0	1	4		463	3	0			
	da da	Aug. 7		17	0	22		40		0			
1	four stamps (new style) ating, cap of crushing of 24 hours	}								_	503	5	0
-											1,295	17	0
	From heads oscill able 20 to bead										L part	7.0	10 11

It may be mentioned that the sales up to July 4, 1884, were made from the work of four heads of old style stamps worked by a waterwheel. These stamps are nearly three miles distant from the mine and were leased by the company so soon as the larger reserve of ore had been discovered. The four oscillating stamps started in a very unfinished manner on Whit-Monday and no regular work was performed until the past three weeks. This was not so much owing to the stamps as to the fact that they could crush enough in a few hours to test the capacity of the partly-erected floors to the utmost.

Those people who do not understand tin ore dressing must remember that, after dressing, the ore has to be calcined, or burnt, and here the company were and are, for the present, restricted to the small burning house at Carbis. Notwithstanding these drawbacks the company from the product of about 14 days' actual work, sold on Aug. 2 and 7 10 tons 17 cwts. 1 qr. 26 lbs.

With the present stamps 30 tons per month should be easily returned, and a profit of £500 per month should be made, but as the stamps are expected to be doubled by January, the profits should be at the rate of £1100 to £1200 per month.

at the rate of £1100 to £1200 per month.

It should be remembered that Owen Vean and Tregurtha Downs are two properties under one company, and that at the first working, about 40 years since, when the price of copper ore was high and the

Total ... ... £415,000

and they are comparatively young mines, only 60 fms. deep.

We have from time to time advised clients to take an interest in these mines; to those who have not done so we again repeat that advice with tenfold strength, as we are quite certain this mine should be a dividend mine of not much less than 20 per cent. per annum. Eleven tons have been sold for the month ending Aug. 30.

THE SHOREHAM PORTLAND CEMENT COMPANY (Limited).

Portland cement making is very nearly a monopoly, and large fortunes have and are being made in its manufacture.

The works of this company are being rapidly completed for an output of 500 tons per week, and the following extract from the Brighton Gazette, of Aug. 14, will give some idea as to the prospects:—

"On Saturday, at the Shoreham Portland Cement Works a dinner was given to the employees of the company, on the occasion of the erection of the engines and the completion of the engine-house. The invited guests inspected the premises and the massive engines.

"The toast of the evening—'Success to the Shoreham Portland Cement Company (Limited)'—was proposed by Mr. T. PEARSON, who, in an excellent speech, said he felt convinced of the ultimate success of the undertaking, the property being held at a nominal rent, and all the materials necessary for the manufacture of cement lying on the company's own property. The coal and coke necessary for the manufacture, and he lying on the company's own property. The coal and coke necessary for the manufacture was much cheaper there than at London, and he believed the prospects to be so promising that if the [company were shortly to pay 25 per cent. on the capital, he, for one, should not be surprised. He congratulated the promoters of the concern upon the success he felt sure awaited them, and he believed it would exercise a beneficial influence upon the trade and proserrity of Shoreham cise a beneficial influence upon the trade and prosperity of Shoreham

cise a beneficial influence upon the trade and prosperity of Shoreham and the district generally.

"Mr. Balllard, in returning thanks on behalf of the company, stated that he could challenge comparison of these works with any in existence, and it would be found that they occupied the foremost position in every respect, especially as to command and costlessness of the raw materials, the cheapness of fuel supply, the facilities of transit, the natural capabilities of the premises for the manufacture and that, in the construction and arrangement of the buildings, machinery, and plant, every modern improvement had been availed of. He agreed with Mr. Pearson that a dividend of, at least, 25 per cent. (not an infrequent one in Portland Cement Companies) might reasonably be expected. He joined with the previous speaker in the conviction that the development of this company would greatly promote the welfare of this district. When merchants found that they could get a freight of Portland cement back, they would send their other merchandise to Shoreham, and he trusted that the result would be that in time Shoreham would become a great centre of industry and trade. "The 'Health of the Manager' was proposed by Mr. D. Pillmore, and—

PILMORE, and-"Mr. Long, in reply, made some interesting practical remarks. ing gradually exhausted, but here there was vast material, with for converting it into cement

every facility for converting it into eement."

The £1 fully paid shares should be bought at £5s.
The value of shares in Portland Cement Companies may be illustrated by the following extraordinary fact:—£1000 worth of shares in a Portland Cement Company were sold by public auction on May 20 last, at the Mart, Tokenhouse-yard and, realised £7708, or at the rate of nearly 800 per cent. premium

PENNEGARREG SILVER-LEAD.—On our visit the lode had been cut both north and south of the shaft. The following is a copy of the latest information from Capt. Joseph Evans.—"I am happy to inform you that we got change altogether in the

ing is a copy of the latest information from Capt. Joseph Evans.—
"I am happy to inform you that we got change altogether in the
new lode. The lode is about 5 ft. wide, 2 ft. is a strong mixture of
lead ore—that is on the footwall; the other 2 ft. is copper mixed
with spar. In the other foot by the hanging-wall we got fine spots
of blende, looking very rich. I believe now, by all appearances, that
it will improve fast. The water is rushing out of it.—JOSEPH
EVANS, Aug. 22, 1884."
The geological formation in which this lode is found consists of
inter-colated beds of sandatone and clay-slate. Only one mine in
Wales is in a similar formation, but that mine has been profitably
working for over 100 years. The celebrated Mechernich
Silver-Lead Mines near Cologne are also in sandatone, but friable.
From 1869 to 1883 these mines returned £719,600 in dividends.
The £1 fully-paid shares are worth buying at 15s.

The £1 fully-paid shares are worth buying at 15s. Accurate, reliable, and unbiassed information can be had in all Mines, Home and Foreign. Correspondence invited.

SEPT.

ted that I re such as as had tak airman wa

airman wanfell shounght was rvices were d no double matter was

answer to 3271. was uses in An to staffs, a ral charge Mr. Snell: set the co-merica. I

mports framports framports framports

COPPE here is as

### TO THE METAL TRADE.

FOR COPPER, I'IN LEAD, &c., apply to-MESSER. PELLY, BOYLE, AND CO., SWORN METAL BROKERS.

ALLHALLOWS CHAMBERS, LOMBARD STREET, LONDON.
(ESTABLISHED 1849.)

### HENRY NUTT. BIRMINGHAM,

LEAD ASHES, LEAD SLAGS, SULPHATE OF LEAD, TIN ASHES, TERNE ASHES, AND ALL REFUSE CON-TAINING TIN AND LEAD.

#### COPPER AND SPELTER COMPANIES DESIRING TO

INCREASE their SALES and CONNECTION with Leading Houses, should send description, prices, and best Agents' terms to

HOWARD LANE AND CO., 115, 116, PALMERSTON BUILDINGS, OLD BROAD STREET, LONDON, E.C.

HENRY WIGGIN AND CO., (LATE EVANS AND ASKIN), NICKEL AND COBALT REFINERS,

### BIRMINGHAM. The Mining Market: Brices of Metals, Ores, &c.

1000	A 1 0 1
META	L MARKET-LONDON, SEPT. 12, 1884.
	TIN. MOLESId, Es. d.
IRON. & s.d. & c.d.	
Pig, GMB, f.o.b., Clyde 2 1 656-2 1 7	- No. of the last
	refined 06 10 0-
	Australian
in London, 5 10 0	Banca nom
, Stafford., ,, 6 5 0-	Straits
., in Tyne or Tees 5 0 0	
., Swedish, London 9 0 0- 9 10 0	COPPRE.TY
Rails, Welsh, at works 5 0-	Fough cake and ingot. 58 0 0-59 0 0
Sheets, Staff., in London 7 5 J- 7 10 0	Best selected 58 19 0 - 60 0 0
Plates, ship, in London . 7 10 0- 8 0 0	Sheets and sheathing, 63 10 0- 67 0 0
Hoops, Staff., 6 7 5	Flat Bottoms 56 17 0- 70 0 0
Nail rode, Staff., in Lon, 6 5 0-	Wallargo nom.
STEEL.	Burra, or P.C.C 60 0 0-
English spring 12 0 0-18 0 0	Other brands nom. 58 10 0- 60 0 0
cast30 0 0-45 0 0	Chili bars, g.o.b 54 2 6
Swedish, keg	QUICKSILVER.
fag. ham13 10 0-14 10 0	QUICKSILVER. Flasks, 75 lbs., war 5 11 0-
Rails at works 4 12 6- 5 0 0	PHOSPHOR BRONZE.
Light, at works 5 12 6- 6 12 6	Alloys I. and II £107 0 0
ATT be LEAD.	V, 119 0 0
English pig, common11 0 0-11 2 6	VI. and VIL 127 0 0
L.B11 2 6-11 5 0	XI 105 0 0
W.B	. A Duro A, Dura B 100 0 0
sheet and bar. 11 12 6 12 0 0	
pipe12 5 3	Wire
red	
white	Sheets
patent shot14 0 0	
Spanish	Yel, met. sheath. & sheets 51/16-6
	TIN-PLATES.* per box
Metal per owt	Charcoal, let quality 1 1 0-1 2 0
	20d dustiley 0 to 0- 1 0 0
SPELTER.	Coke, 1st quality 0 16 0- 0 16 6
Silesian ordinary brands14 5 0	2nd quality 0 15 0- 0 16 0
., special brands, 14 10 0-	Black per ton 15-10 0
English Swanses	Canada, Staff, or Gla. 12 0 0-
Sheet sinc	at Liverpool

At the works, is, to is, 5d, per box less for ordinary; 10s, per ton less for and at X 5s, per box more than 10 quoted above, and add 5s, for each X ren plates 2s, per box below tin-plates of similar brands. X 6s, per box more than a 2s, per box below tin-p

REMARKS.—The changes that have taken place in the Metal Market during the past week have not been very important, and the amount of business done has remained restricted. Unless some recovery does soon take place it is to be feared there will be no genuine revival this during the pastweek have not been very important, and the amount of business done has remained restricted.: Upless some recovery does soon take place it is to be feared there will be no genuine revival this year. Spurts thare may be, fluctuations of a favourable nature may arise, not only from the movements of the operators, but because there are cretain teatures in the market which strongly indicate a better state of affairs; but against this there are features of an adverse character, which up to the present have proved too powerful to permit of any permanent advance in prices. The crief unfavourable feature in the markets just now is lake of confidence. Credit is good, and there is plenty of confidence in the financial stability of the various firms who deal in metals, but there is a want of confidence arising from terra that something unexpected may crop up, that supplies may some forward in excess of requirements, and that prices may continue to crushbe ways. It is this feeling of healtation, of nervousness, of anxiety, that checks business and prevents the full development of trade, and usa'll it is removed we must supect a continuance of depression and inactivity; and so deeply is this feeling of uncertainty rooted in the minds of the trade that not even the many favourable buffuences are allowed to bear any impression upon the markets, though upon the minds of the trade that not even the many favourable buffuences are allowed to bear any impression upon the markets, though upon the minds of the trade that not even the many favourable to the ultimate good of the trade. Another cause to which the present duliness is that the submit to submit to see any impression upon the markets, though upon the minds to submit to submi

menoement of the week the tendency was towards reduced rates, although yesterday there was a slight change for the better. This little turn for the better is easily accounted for, the only surprise being that it did not come before. We have on previous occasions being that it did not come before. We have on previous occasions brought under the notice of our readers the constantly improved state of this particular market, and drawn attention to the very low prices, not-sithatending the improved statistics, and the very satisfactory genuine business that has been done in this metal, as is clearly evidenced by the large deliveries that have repeatedly been recorded, and it may be interesting to see what reason there is to hope and expect that each large deliveries may be kept up. All the uncliers are reported to have freely booked orders, and enough to keep their works in full operation for the next month or so, by which it may be assumed to demand for the raw material must necessarily be destained, if not further aggressed.

rune orders that smelters have chiefly secured have been for Indian sheets, both copper and yellow metal, and even now at the advanced rates there is difficulty in obtaining any speedy delivery. Therefore, when the manufacturers were so well booked with orders and when they were pushing up their prices it was a little difficult to comprehend why prices of Chill hars should have receded, and more particularly when, according to the most recent advices from Valparaiso, only light charters had been advised, and stocks of that particular kind of copper, as well as other norts, had been materially reduced. Further charters will be annoted past week; and if thisy are again light, it is exceedy probable that holders will continue to let purchasers effect their contracts at such extremely low prices as are now current; and it certainly appears a little dangerous to keep prompts open. to the property of this market remains very unsatisfactory

for business is not only still very small, but prices also remain most unremanerative. In addition to these unfavourable features, which have long been prominent characteristics of the market, there is i kewise the disturbing influence of somewhat serious wages disturbing and the serious wages disturbed to serious and fact were executed to the serious serious wages disturbed to stand it set, it is quite impossible to set the situate termination of

the disputes. Amongst the ironworkers business is very much curtailed, owing to the low prices, and the advices go to show that there are occurring every day numerous cases of closing works. The shipbuilding trade is rather brisker, owing to various Government orders for the Soudan Expedition; but this improvement is not expected to be more than temporary. It will thus be seen that the state of the trade is not satisfactory, and that its condition is sufficiently sensitive to warrant buyers purchasing sparingly, as there is a fair chance of being able to buy hereafter at slightly reduced rates, though any material further reduction is not at all likely, as prices are already too low to give any return to manufacturers and makers. Compare with corresponding periods of previous years, and they appear particularly olosep; but this, instead of forming any temptation, seems rather to deter operators from coming forward and making purchases, as it is too strong an evidence of the very bad state of trade.

When prices are much higher than they are now operators are, as a rule, much more plentiful, simply because then the tone is invariably much more obserful, and the chances of speedily turning over at a profit much more probable. Now, however, whilst prices are considerably safer, yet holders will, doubtless, have to wait some time before they are able to secure any profit at all. According to advices from Scotland, the slipments last week were rather better than what they have recently been, and as those for the corresponding week of last year were somewhat small the comparison at hat appears favourable. The Glasgow warrant market opened steadily on Monday, and business was done between 18. 64. and 41s. 5d., and on Tuesday the tone was quiet, and prices casies, transactions being recorded between 41s. 45d. and 41s. 5s., while ou Wednesday there was more business doing, and prices were firmer, 41s. 654d. being the quotations. Yesterday the market was ateady; there was a fair business, and prices were firmer, and a st

period of 1882.

The number of furnaces in blast is 95, against 94 last week, and the public stock has been further reduced by 885 tons, and is now estimated at 534,982 tons, against 535,867 tons last week. The imports of Middlesborough pig-iron into Grangemouth last week were 5313 tons, against 5104 tons for the corresponding week of last year, and which is a decrease of 827 tons, and thus making a total decrease for the whole of this year compared with last of 6697 tons. Upon the Middlesborough market business is confined within the most narrow limits, and the prospect is considered most discouraging. In quotations there is no change, makers combination price being 37s. for No. 3, and second-hand lots are offering at 56s, 444d., whilst there is a free supply of forge iron at 34s., buyers offering rather less. There is an absence of buyers for warrants, the nominal quotations being 36s, for No. 3. The manufactured trade shows no improvement, and 6s, 15s. for sheets.

According to advice from Wolverhampton the market there is rather better.

present prices are 6i. for ship plates, 4i. 15s. for angles, 5i. 2s. 6d. for bars, and 6i. 15s. for sheets.

According to advices from Wolverhampton the market there is rather better, and for sheets prices are decidedly stiffer, and there is more business doing. The Birmingham market is likewise said to show a further improvement; bus here the better tone is chiefly in the pig-iron branch of the trade, some large contracts having been effected for forward delivery, obledy for Derbyshire and Lincolashire brands. The demand is at last exid to be fully on a level with the supply, and prices are quoted up 1s. 6d. per hon. There is also an increased demand for manufactured, and prices are dearer, whilst it is said that the only thing now which duliens the tone and prevent the prospect from being encuraging is the continuance of the colliers strikes.

Ein.—This market continues to be influenced by the action of operators, but this week the tendency of prices has been downwards:

operators, but this week the tendency of prices has been downwards. This is a complete change to what we had to report last Friday, and it would seem that operators who were purchasing with a tolerable amount of freedom last week, and causing prices to advance have

amount of freedom last week, and causing prices to advance have been taking their profits this week, and thus making prices to recede. As prices have now fallen again to about what they started from, further profits, except to the "bears," are impossible; and further than this, it is carried profits, except to the "bears," are impossible; and further than this, it is carried profits except to the "bears," are impossible; and further than this, it is carried profits except to the another than the purchases that were made a week or more ago his be been truly effected, and the changes in this metal are finvariably unden, so that it is just as likely there will be advancing quotations during the next week as recoding.

Nothing fresh has arisen to cause the change that has been made, no new statistics have been published to show any altered stocks, or no advices to indicate any extra supplies or diminished deliveries, and the movements can only be attributed to the mevements of operators, and, as in the past, so is the future, the market will be regulated. Advices of the deliveries during the first half of the meanth will be to hand next week, and according as they show large or small figures, so speculators may be guided in their immediate future action; but it is impossible to say for certain, for aftern their immediate future action; but it is impossible to say for certain, for aftern their immediate future action; but it is impossible to say for certain, for aftern their immediate future action; but it is impossible to any other than the statistics and other influential features which invariably affect the market. A Datch sale is announced to be held at fottertam of Sept. 30, when 22,200 slabs of Banca will be offered for disposal. The annite for Australian an if Strates.

SPELTER.—Large transactions have taken place, and there is a firm market, and we quote ordinaries at 141. 5s., and specials at 141.

142. 10s. per ton.

LEAD is quiet, and business has been done in Spanish at 107. 12s. 6d. spot, and 107. 7s. 6d. forward, while English pigs are quoted at 117. to 111. 2s. 6d. per ton.

STEEL.—With the exception of a few fair orders which have been placed for rails the market remains quiet and unaltered.

TIN-PLATES.—A fair business continues to be transacted, and prices

are strong.

QUICKSILVER.—The Board of Trade Returns for August are as follows:—

1882. 1883. 1884. 

In the MINING SHARE MARKET the dealers have been chiefly engaged in the settlement of the usual fortnightly account, but a fair amount of business has also been transacted in several prominent mines, and in some at advanced prices. The mines dealt in have included Dolcoaths, East Pool, West Kitty, Prince of Wales, Old Shepherds, Oscar, New West Caradon, New Kitty, East Blue Hills, and a few others.

few others.

TIN advanced early in the week, but did not maintain the rise,

In shares rather more has been TIN advanced early in the week, but did not maintain the rise, though it has been pretty firm. In shares rather more has been doing, but prices are mostly nominal. Carn Brea, 3\(\frac{1}{2}\) to 3\(\frac{1}{2}\), Cook's Kitchen, 9\(\frac{1}{2}\) to 10\(\frac{1}{2}\); New Kitty, 1\(\frac{1}{2}\) to 1\(\frac{1}{2}\); South Condurrow, 9\(\frac{1}{2}\) to 0\(\frac{1}{2}\); South Frances, 6\(\frac{1}{2}\) to 7\(\frac{1}{2}\); Tincroft, 8 to 8\(\frac{1}{2}\); West Basset, 2\(\frac{1}{2}\) to 3\(\frac{1}{2}\); Now Kitty, 1\(\frac{1}{2}\) to 1\(\frac{1}{2}\); South Frances, 6\(\frac{1}{2}\) to 5\(\frac{1}{2}\). Wheal Pevor, \(\frac{1}{2}\) to 3\(\frac{1}{2}\); a communication has been effected between the 16 cross-cat and the level driven west of winze in the bottom of deep adition the new tin lode, and this, the agents state, has laid open a good section of stoping ground. The lode in the winze is worth 15\(\llowbreak\), per fathom, and increased returns may be expected in the future.

stoping ground. The lode in the winze is worth 15% per fathom, and increased returns may be expected in the future.

Wheal Groaville, 6 to 6½; the accounts for the quarter show a balance in favour of the mine of 1383%. 3s. 1d., out of which a dividend will be declared. The tin sold (112 tons 12 cwts.) realised 5436%, 12s. 5d. The agent reports that, "taking the mine on the whole, it is working fairly well." West Kitty, 10 to 10½; Wheal Agar, 16½ to 16½; Wheal Basset, 2½ to 2½; Wheal Kitty (St. Agnes), ½ to ½; Wheal Uny, ½ to ½. At St. Just United, the accounts for the quarter showed a loss of 133%. The tin sold (78 tons), with other credits, amounted 3869%. The liabilities amounted to 759%, but it was not thought necessary to make a call. South Kitty, 7-16ths to 9-16ths; Polberro, 1½ to 1½; Trevaunance, 1 to 1½; West Godolphin, 1 to 1½; West Phœnix, ½ to ½.

COPPER is firm, and rather more business has been doing in sharea Bedford United, 1½ to 1½; to 2000 Great Consols, 2½ to 3; Devon

COPPER is frm, and rather more business has been doing in snares Bedford United, 1\(\frac{1}{2}\) to 1\(\frac{1}{2}\); Devon Great Consols, 2\(\frac{1}{2}\) to 3; Devoi Friendship, 2s. to 3s.; Gunnislake (Clitters), 7-16ths to 9-16ths Marke Valley, \(\frac{1}{2}\) to \(\frac{1}{2}\); Mellanear, \(\frac{1}{2}\) to 1. Prince of Wales have been largely dealt in and in demand, and leave off \(\frac{1}{2}\) to \(\frac{1}{2}\). A special A sp report from Capt. Knott will be found in another column report from Capt. Notic will be round in another column. The lode in the 102 east continued to the last taking down worth 50?, per fathom. Wheal Crebor, 1½ to 1½; the points here continue about the same as last week, West Crebor, 1-16th to ½. New West Caradon, 3-16th to ½, call paid; at the meeting a call of 6d. per share was made. The accounts showed assets over liabilities 1211. 5s. 2d., inmade. The accounts showed assets over liabilities 1211. 5s. 2d., including estimate of 16 tons of copper ore, valued at 961. West Caradon, 1-16th to \$\frac{1}{2}\$; at the meeting here a call of 1s. 6d. per share was made. The accounts showed liabilities over assets 1791. 1s. 11d., including the estimated value of 65 tons ore for sale, 2401. The various points in the mine, the agent states, are looking more encouraging that for some time past, and the 38 in Gilpin's lode may open out a good piece of ore ground. South Caradon, \$\frac{1}{2}\$ to \$\frac{3}{2}\$; New Caradon, \$\frac{1}{2}\$ to \$3\$ to \$3\$.

LEAD.— Very little business has been done in lead shares, and for the most part prices are nominal. Great Laxey. \$\frac{1}{2}\$ to 10: Roman

LEAD.—Very little business has been done in lead shares, and for the most part prices are nominal. Great Laxey, 9 to 10; Roman Gravels, 3 to 3\(\frac{1}{2}\); Leadhills, 1\(\frac{1}{4}\) to 1\(\frac{1}{4}\); New Langford, \(\frac{1}{2}\) to 1\(\frac{1}{2}\); Old Shepherds advanced to \(\frac{1}{2}\), \(\frac{1}{4}\); East Rose, \(\frac{1}{2}\) to \(\frac{1}{2}\), \(\frac{1}{2}\) weardale, 1\(\frac{1}{4}\) to 1\(\frac{1}{2}\). FOREIGN MINES have not been in large demand and in some cases lower prices have been accepted. The Spitzkop (Lydenburg) Gold Mining Company received telegram this (Friday) morning—Have

struck rich rotten reef near Silos. The shares are quoted \$\frac{1}{2}\text{in}\$ Akankoo, 5-16ths to 7-16ths; Alamillos, \$\frac{1}{2}\text{ to \$\frac{1}{2}\$; Almada and \$\frac{1}{2}\text{ to \$\frac{1}{2}\$; Angio-African Diamond, \$1\frac{1}{2}\text{ to \$\frac{1}{2}\$; Asia Minor, \$\frac{1}{2}\text{ log}\$ Birdseys, \$\frac{1}{2}\text{ to \$\frac{1}{2}\$; Bratsberg, \$\frac{1}{2}\text{ to \$\frac{1}{2}\$; Asia Minor, \$\frac{1}{2}\text{ log}\$ Birdseys, \$\frac{1}{2}\text{ to \$\frac{1}{2}\$; Bratsberg, \$\frac{1}{2}\text{ to \$\frac{1}{2}\$; Callao Bis, \$\frac{1}{2}\text{ to fontales, \$\frac{1}{2}\text{ log}\$ Copiago, \$\frac{1}{2}\text{ to \$\frac{1}{2}\$; Chille Gold, \$1-16\text{ to \$\frac{1}{2}\$; Colorado United, \$\frac{1}{2}\text{ log}\$ of the current quarter of \$1\text{ s. per share, payable on Sept. Fortana, \$2\frac{1}{2}\text{ to \$\frac{1}{2}\$; Frontino and Bolivia, \$\frac{1}{2}\text{ to \$\frac{1}{2}\$; Kapanga, \$\frac{1}{2}\text{ log}\$ in the meeting yesterday will be found in another column. Marei Iron, \$2\text{ to \$\frac{1}{2}\$; Mason and Barry, \$10\frac{1}{2}\text{ to \$\frac{1}{2}\$; Mwysore Gold, \$\frac{1}{2}\text{ log}\$ in New Callao, \$2\text{ to \$4\text{ s. New Emma, \$\frac{1}{2}\text{ to \$\frac{1}{2}\$; Mey Potosi, \$\frac{1}{2}\text{ log}\$ in \$\frac{

South Aprican Diamond Mines.—Our Kimberley Correspondent sends us telegram by Eastern and South African Cables. Kimberley, Sept. 9: The loose shale lying on north side of Kimberley Mine, which fell on the 5th of November last, has moved format this morning and carried away both shafts of the Central Compartown to blue ground. The movement continues threatening to cover the remainder of the company's claims as far as the sent reef, and will probably involve the whole mine with exception of the high ground at the west end and high claims of Rose Innes and South-east companies lately amalgamated with Central Company Underground workings are intact, though communication is the porarily stopped. Only gear at work is in Rose Innes ground, which is not likely to be affected. Central Company has commenced new shaft outside to pierce the hard rock and tunnel below into the mine for permanent work.—Bichardson.

The Market for Mine Shares on the Stock Exchange has been again excessively dull; but as there has been a marked improvements day in general home securities, dealers are in much better spiritum.

day in general home securities, dealers are in much better spirits to the immediate future. The price of metals continues low, and lead is still lower, but both copper and tin are decidedly firme, and some few sales have been effected at an advance of about 5a per ton. The shares in several new concerns, which had been looked upon as virtually defunct, have again been heard of, and there is a doubt that a very slight improvement in the metal trades, and its declaration of a few more dividends than we have been accustomed to lately, would lead to a general revival. In the iron trade the improvement has already commenced, so that the prospects an encouraging. couraging.

provement nas arready commenced, so that the prospects as encouraging.

Our usual telegram from Cornwall this evening says: — During the past week the state of the Cornish Mine Share Market has bee variable. In sympathy with the lack of steadiness in the tin marks most of the leading shares remain in a satisfactory condition, as far as the mines are concerned. Shares, however, do not show any material alteration, the general tendency being towards firmes. Wheal Grenville report is considered very satisfactory, the profit shown being 7721. A 2s. 6d. dividend is anticipated. At New Cook Kitchen yesterday a loss of 8431, and a debit balance of 29511 was reported, and 7s. per share called up. The manager stated that they were 30 fathoms from the great cross-course. At South Creby yesterday a loss of 13107., increasing the unfavourable balance to 52131, was reported. A call of 12s. 6d. per share was made, his expected that greater quantities of tin would be met with as the mine gets deeper. At Cook's Kitchen prospects are reported to be much better, and shares have advanced. A 5s. dividend is though probable at Wheal Agar's next meeting.

much better, and shares have advanced. A 8s. divident is never much better, and shares have advanced. A 8s. divident is never probable at Wheat Agar's next meeting.

Devon Great United, to \$\frac{2}{3}\$; the lode in the 120 fm. level as and west is \$\frac{2}{3}\$ to 4 ft. wide, and producing some good quality coper and mundic ores, as well as the 60, west of Watson's shaft.

Devon Great Consols, 3 to 3\frac{2}{3}\$; the monthly sampling of coper ore is about \$00 tons. So far as seen in sinking below the adit at Wheat Maria, the lode is 3 ft. wide, and yields some good quality and mundic ores, and some important discoveries may be at

ore is about \$90 tons. So far as seen in sinking below the adi it Wheal Maria, the lode is 3 ft. wide, and yields some good maliy copper and mundic ores, and some important discoveries may be a pected in this part of the mine.

Drakewalls, \$\frac{1}{2}\$ to \$\frac{1}{2}\$; a favourable report has been received from the new manager this week, and as will be seen therefrom a set and important lode is being opened on from which good results are looked for. It is expected that better progress will be made in clearing out the shaft from the 92 to the 100.

Kit Hill, \$\frac{1}{2}\$ to \$\frac{1}{2}\$; at the tunnel level they are still passing through the great lode, which as far as seen is about 48 ft. wide.

New Cook's Kitchen, 1 to 1\$\frac{1}{2}\$; at the meeting, on Thursday, the accounts for the 16 weeks showed a loss of \$43\frac{1}{2}\$, increasing the debit balance to 2951\$. A call of 7s. 6d. per share was made.

Ruby, \$\frac{1}{2}\$ to \$\frac{1}{2}\$; a small seam of fair grade ore having bose eccountered in the Home Ticket, which will be duly explored. In Lord Byron tunnel is nearing completion, and the ground herabouts is considered to be the best prospect in the mine at present. South Crofty, \$2\$ to 3; at the meeting, on Thursday, the accounts for the 16 weeks showed a loss of 1310\$\frac{1}{2}\$, increasing the debit balance to 5213\$\frac{1}{2}\$. A call of 12s. 6d. per share was made.

South Deven United, \$\frac{1}{2}\$ to \$\frac{1}{2}\$: the sale of copper ore—250 ton—will be made next week. The quality of this ore being met better good prices are expected for it. A satisfactory report has been required from the manager at the mine, and which will be read with interest. There is a good lode in Martin's shaft, and good course has been driven through for about 20 fms.; the present end of level (120 fm. level) being worth 14\$\frac{1}{2}\$. For fathou, and improving. In the back of this level one stope is worth 14 per fathou.

good course has been driven through for about 20 lms.; assemend of level (120 fm. level) being worth 14% per fathom, and in-proving. In the back of this level one stope is worth 14 per fa-and another 10% per fathom.

In Lead Mine Shares there is absolutely nothing doing, whilst the price of the metal continues to decline; it is about 2s. 6d. cheser than last week. Roman Gravels, 3 to 3½; the mine continues to que-out well, and 100 tons of lead ores were sold on Thursday last, realout well, and 100 tons of lead ores were ing 6927. 10s. Another sampling of lead and blende ores will be made next week.

made next week.

Leadhills, 1½ to 1½; the levels driving south have improved in its production of ore. The general meeting of shareholders, we am informed, will be held early next week, when a favourable statement of accounts and report will be submitted. The lead market in Scalland is reported to be firmer.

Shotts from, 32½ to 35; at the annual meeting on Wednesday the report, stated that the net profit for the year was 3511f. 9a. 2d, of

report stated that the net profit for the year was 35111.9s. 2d., which the directors recommended that there be carried to 2 which the directors recommended that there be carried to net year's account the sum of 8021. 3a., less a dividend of 5 per cent. Amounting to 2761. 10s. on the preference shares. The director have written off the sum of 20,000l for depreciation, being 2709l. 6s. 2d. taken from last year's profits, added to the sum of 17,290l. 13s. 10d., being the amount of undivided profits at Jane 3, 1883, after payment of the preference dividend for the year to this date. From the balance-sheet it appears that the undivided profit amount to 802l. 3s.; that the outstanding accounts due to the copary amount to 15,752l. 6s. 8d., and that the expenses of general management, including salaries, directors fees, &c., amounted to 128l. 17s. 8d. The profit on pig-iron was 11,591l.; en eal, 8054l. 11s.; and rents, lands, and houses brought in 2017.

The British Land and Mortgage Company held a meeting from which reporturs were excluded, on Wednesday. The Chairman, Six Stuart Hogg, expressed regret that the report was not favourable.

Stuart Hogg, expressed regret that the report was not favourable. Many shareholders, upon the issue of the report, had written requesting that the company should go into liquidation. If that coars were pursued a call of 2l, would have to be made by the liquidator. Taking a retrospective glance at the company, by Taking a retrospective glance at the history of the company, by GOLD

GAS to this e INS

lised NE

IRI obtai impo wash the p deal

grai: strik

pur irid ing beir g g obt

The

suo clai

QUICKSILVER.

mports from Jan. 1 to Aug. 31, bottles, about 52,892 ... about 55,926 sports ..., 35,743 ..., 32,866 ..., 35,743 ..., 35,743 ..., 35,743 ..., 31,500 sports ,..., 2,343 ..., 3,150 sports ,..., 2,343 ..., 3,150 sports ,..., 2,5 10 Stock in London to Aug. 31, 1884, roughly calculated, is about 0,000 bottles.—London, Sept. 11. J. Bennett Brothers.

Copper and Tin.—Messrs. Rickards and Bee (Sept. 9) write:—
ner is as yet no sign of alteration in the general depression of feeling in busises circles with regard to copper. We suppose, notwithstanding enormous
susumption and favourable statistics, copper will have to wait till a better tone
sersils all round. Tin in good demand, and moderate supply, prices varying
roun 53. to 51. and back again, with very fair regularity. The delivery of
breign out of warehouse, London and Holland, is—Jan. 1 to end of August, 1884,
5(20 tons, against 15,203 tons in 1883, and 14,724 tons in 1832. The stock of tin
in public stocks here and in Holland, omitting Banca in Dutch Trading hands,
in—720 tons Aug. 31, 1884; 7876 tons Aug. 31, 1883; 9050 tons Aug. 31, 1882,
Pries: Straits, 51. 10s., 93. 15s., 101. 10s.

Shipment of Straits to England, Jan. 1 to Aug. 31, 2475.

Total 13,425 11,810
The quantity of tin exported from the United Kingdom from Jan. 1 to Aug. 31, 425 1834 1884 1883 1882.
English Tons 3,502 Against 3,610 3,637
Foreign 9,862 9,572 6,705

perial Continental have risen 2 per cent., other foreign companies firm.

INSURANCE SHARES have, according to this evening's report of Merra, W. L. Werd and Co., of the Stock Exchange and Finch-lane, been dealt in as follows:—Oity of London Fire (Limited), \$4; to 10, 12; (ity of London Fire (Limited), \$4; to 10 in, 17, 4; to 17, 5; Fire Insurance Association (Limited), \$4; Commercial Union, 17, 4; Lion Fire (Limited), 27; Merchants Maxine (Limited), 21; Morthants Maxine (Limited), 5, North British and Mercantile, \$1; Ocean Marine (Limited), 5, \$5; Phomis, 227 to 228; Rock Life, 7, 4 to 7, 5; Ryal Exchange, 375 to 378. Insurances steady, Alliance Fire and Life especially firm. Marine companies easier.

BRATSBERG.—The ore by the Mary Owen has weighed off 210 tons net, and the settled produce being 22 per cent., the price realised is 11t. 7s. 4d. per ton, which is very satisfactory in the present times. Another cargo is now on the way, and a further shipment will leave Skein in a few days.

NEDENÆS COPPER MINES.—By the latest advices these mines are looking very well. A full report is expected at the beginning of the week, and will be issued to the shareholders.

. 13,182

10,242

Total ..... 13,264 ....

ted that Mr. Warden was invited over by the promoter. His credentials resuch as would justify the board in appointing him. After large transactions are such as would justify the board in appointing him. After large transactions are provided to the company, the simal was deputed to go out, and after he arrived he requested that Mr. self-libenidal also be sent out. We estimated that the value of the propertys were disposed to the variety of the company rices were disposed to with Mr. Warden holds 1000 shares in the company rices were disposed to the with Mr. Warden holds 1000 shares in the company of the disposed to the state of the property of the words in an agreement were inserted, a master would not wish money to be spent in further litigation, and a master of questions, the Chairman (Sir Stuart Hogg) and the whole of the safer of questions, the Chairman (Sir Stuart Hogg) and the whole of the safer, at each place, the salaries alone amounting to 954. In regard to the staff, at each place, the salaries alone amounting to 954. In regard to the staff, at each place, the salaries alone amounting to 954. In regard to the staff, at each place, the salaries alone amounting to 954. In regard to the staff, at each place, the salaries alone amounting to 954. In regard to the staff, at each place, the salaries alone amounting to 954. In regard to the state of the salaries alone amounting to 954. In regard to the staff, at each place, the salaries alone amounting to 954. In regard to the state of the salaries alone amounting to 954. In regard to the state of the salaries alone amounting to 954. In regard to the state of the salaries alone amounting to 954. In regard to the state of the salaries alone amounting to 954. In regard to the state of the salaries alone amounting to 954. In regard to the salaries alone amount to salarie that the regord and fraudulent prospectus, and I forther than the salaries and expensive litigation to the company. The Chairman objected for the adjournment and 13 against it.—The meeting salari 

1884

Correspondence Cables—
Kimberley de forward Company, atening to the south tion of the Innes and Company, on is temmed a menced a we fint the

ring the as been market

to be collect collect

looking very well. A full report is expected at the beginning of the week, and will be issued to the shareholders.

IRIDIUM.—In a paper "On the Application of Iridium to Art and Manufacture," read before the American Institute of Mining Engineers, Mr. DUDLEY stated that the principal sources of supply are Russia and California, the iridium in the former country being obtained from the platinum mines of the Urals, and in California from the placer gold washings, where, indeed, it is a source of considerable annoyance, on account of its specific gravity, which is about 19°3, nearly the same as that of gold. Consequently, it is impossible to separate the gold from the iridium by the process of washing, and it has to be effected, therefore, by amalgamation of the gold, or, dissolving it out in aqua regia. The possession of or dealing with iridium in any way is forbidden by law in Russia, on account of speculators in gold dust adding iridium to it to increase its weight, the result being that when the gold came to be worked in the Mint and the ingots to be rolled into sheets, the individual grains or particles of iridium produced identations in the rolls, and in striking out the coins the dies were marked and defaced, causing considerable loss to the Government. Notwithstanding its comparative abundance, up to the present time iridium has only been applied (with the exception of alloying with platium) for pointing gold pens, forming what is called "diamond" point, and being, in reality, a small grain of iridosmine (or alloy with osmium) soldered on to the tip of the pen. Hypodermic needles for surgical use are now made of gold and tipped with iridium, which is not subject to corrosion like the old steel points, and it is being largely applied to the instruments for surveyors and engineers. In all these cases the combination with the phosphorus by fusion has been the moving power. The application of iridium is now being made to electrical purposes; but the phosphorus in the experiments has to be removed, as being an

32,200 SHARES.

Gold in bars produced in the month of July, 1884, and remitted to Messrs. Baring Brothers and Co., London—15,735-63 ozs.

DIVIDEND distributed for each Share, 28 francs.

(Signed) A. LICCIONI, President.

(Signed) VICTOR T. GRILLET. Treasurer.

LONDON, E.C. ESTABLISHED UPWARDS OF FORTY YEARS.

MESSRS. WATSON BROTHERS, in referring to their public Circular in the Mining Journal, would also observe that they BUY and SELL SHARES at the nett market prices of the day in all well-established and respectable Mining Companies; also in English and Foreign Funds Railway Stocks, to.

cent. of Cannel coal. In the stores, which, of course, adjoin the retort-house, the coal and moist lime are mixed in the proportions already given, and are fed into an incorporating mill, in which they are pulverised and blended, by passing between a pair of toothed rollers. The limed coal falls into receivers, from whence it is lifted up by elevators to fixed hoppers in the retort-house, where it is stored for use. From these hoppers the coal is drawn off as required into West's charging apparatus, and fed thence into the retorts. There are 16 benches of retorts, having six mouth-pieces in each, and West's apparatus, which runs on rails in front of the retorts, can be elevated or lowered to charge the retorts at any level. By this means manual labour attending retort-charging is very greatly reduced. The limed coal process results in an increased yield of ammonia and of tar. At Tunbridge Wells the company convert their ammoniacal liquor into sulphate of ammonia themselves. The ammoniacal liquor is conveyed from the store tanks to stills, where it is distilled over into evaporating tanks heated by steam coils. The sulphate is removed as it is formed, and is drained and stored, being sold for chemical and agricultural uses. The company find their gain in this item to be about 30 per cent. by the Cooper process. Another point for notice is the improved character of the coke produced, which is entirely free from sulphur.

KILLALOE SLATE COMPANY.—At the meeting in Dublin on Sept. 4 the Chairman (Mr. W. Breslin) in congratulating the company on the fact that their property was going on well, said their prospects were encouraging, and from every incident affecting the state of the country, he believed that its condition would be satisfactory by-and-bye. The harvest was good, with the exception of green crops, and even those, after the late rains, would be of use. The question whether there would be a good harvest was as important to the company now as it had been in previous year, for in fact, the success of the company for the year greatly depended on a harvest of plenty. Everything, at present, appeared encouraging, and there was no falling-off in the production of slates. He moved the adoption of the report and statement of accounts. The report recommended a dividend at the rate of 5 per cent, per annum. If that were adopted a sum of 584.5s. 4d. would be required, and, after payment, thereof, there would remain to the credit of profit and loss account-undivided credits—the sum of 1382.19s. 1d.—The motion was seconded by Mr. S. H. Bolton, and adopted. A dividend of 5 per cent, per annum, free of income tax, was then declared for the past half-year.—Mr. R. Sharpe having observed that the expenses this half-year showed a heavy increase, the Chairman explained that as they were continuing to produce slates they were also trying to do some work for the company by clearing off top-rock, but there was nothing charged to capital on that account. It was all charged out of the expenses for the half-year.—Mr. Sharpe observed that the expenses for the last half-year amounted to 32021, while those of the previous half-year were only 27001.—The Chairman said that in the last half-year they had moved from an old place in the quarry to a new one; they had to remove machinery, and to that expense was added the cost of clearing. When one part of the quarry in slates. Their slates within the last two months had been larger than in any half-year fo

Total 13,264	Transport of the end by the contract of the best of the contract of the contra
THE STATE AND STATE OF THE STAT	LEAD ORES.
By at the state of	Date. Mines. Tons. Price per ton. Purchasers.
GOLD AND SILVER Messes. PIXLEY and ABELL (Sept. 11) write :- The	
GOLD AND BILVER. TIMES THE ADDRESS ASSESSED TO	Aug.28 Great Holway 21 & 8 14 0 Walker, Parker, and Co.
only gold imports are 6300t. from South America and 3700t. from Australia. The	Sept. 9-Foxdale
Bank has sold during the week 100,000% in sovereigns, which have been taken	-Pierrefitte 80 9 13 9 J. F. Kimmel.
Postured The P and O. steamers take 20,000t, to nombay and 3000t, to	( Adam Eyton.
stanta Silves continued nominally at 50% d. until Vesterday, when business	11-Rhosesmor 50 7 1 6 Walker, Parker, and Co.
top at 5011 6-4 for India and this is the nearest quotation to-day. The	Quirk, Barton, and Co.
sole arrival is 35,200l. from New York. 122,000l. has been sent by the P. and O.	-West Trelogan 15 7 10 6 Adam Eyton.
steamers Ravenna and Carthage to India. Mexican Dollars are again firmer,	Bones Grands 75 10 0 Adam Eylon.
and 50d, could be obtained for shipment per next mail. The market is, how-	-Roman Gravels 75 6 18 6 Walker, Parker, and Co.
and 50d, could be obtained for sniphier be neck started with her a lawye	- ditto 25 6 18 6 Adam Eyton.
ever, very bare, pending the arrival of the French steamer, which has a large	12-South Darren 25 11 16 6 Walker, Parker, and Oo.
amount on board. 112,2134, has gone to China, and 25,7004, to the Straits by this	
day's P. and O. boat. The quotations for bullion are—Bar gold, fine, 77s. 9d 1/4. per	BLENDE.
or standard; bar gold, containing 20 dwts. silver, 77s. 11d. per oz. standard;	Date, Mines. Tons, Price per ton. Purchasers.
has eller one 5011/ad per oz standard; har silver, containing 5 grs. gold.	Aug 90 Great Welger 20 6 2 Dilleger 10
511/sd. per oz. standard; cake silver, 5411/sed. per oz.; Mexican Dollars, 50d.	Aug,29-Great Holway 30 £ 3 9 0 Dillwyn and Co.
per oz. Quicksilver, 5l. 11s. Discount, 3 per cent.	- ditto (slimes) 10 1 16 0 Villiers Spelter Co.
per oz. Quicasir or, or and	- ditto 30 3 11 0 Pascoe Grenfell.
GAS SHARES.—The principal business in these shares, according	- ditto (slimes) 10 1 13 0 Crown Spelter Co.
to this evening's report of Messrs. W. L. WEBB and Co., of the Stock Exchange	and the second of the second o
and Finch-lane, has been :- Bahla (Limited), Ordinary, 24 to 24%; Bombay	BLACK TIN.
(Limited), 6½ to 7; British Gas Light (Limited), 43 to 43%; Buenos Ayres, New	
(Limited), 13 to 13%; ditto, 6 per cent. Debentures, 1898, 10434; Cagliari Gas	Date. Mines. Tons. Price per ton. Purchasers.
(Limited), 13 to 13%; ditto, a per cent. Dependent 255. Continuental Union	Sept. 11-Phonix United 23 £46 0 0
and Water (Limited), 2114; Commercial Consolidated, 255; Continental Union	
(Limited), Original, 34% to 35%; ditto, New, 25%; ditto, 7 per cent. Prefer-	
ence, 29% to 30; European, New, 10%; Gas Light and Coke, A, Ordinary, 219	CHROME AND COAL MINES ON
to 221; ditto, H, 7 per cent. Maximum, 150 to 151; ditto, 4 per cent. Debenture	
Block 109 to 110: Imperial Continental, 203 1/2 to 205; Monte Video (Limited),	PUBLIC SALE.
11: Rio de Janeiro (Limited), 23% to 24%; South Metropolitan, A, 271; ditto,	BY ORDER of the ROYAL HUNGARIAN COURT OF JUSTICE, Karanseles, the property of the Allogmeine In-
B. 216 to 220. Gas stocks very good, especially the London companies. Im-	I V UKDER OF the ROYAL HUNGARIAN COURT OF
perial Continental have risen 2 per cent., other foreign companies firm.	JUSTICE, Karansebes, the property of the Allgemeine In-
INSURANCE SHARES have, according to this evening's report of	dustrie Action-Gesellschaft, consisting of 39 double MINE MEA-

CHROME AND COAL MINES ON
PUBLIC SALE.

BY ORDER of the ROYAL HUNGARIAN COURT OF
JUSTICE, Karansebes, the property of the Allgemeine Industric Action-Gesellschaft, consisting of 39 double MINE MEASURES of BROWN COAL, 3,519,048 square meters in area, situated
near the railway line between Karansebes and Orsoya: 63 single near the railway line between Karansebes and Orsova; 63 single MINE MEASURES of CHROME ORE, 2,842,308 square meters in area, situated near the Danube river between Tissovitza and Orsova; 23 Mine Concessions on chrome ore; 6270 tons chrome ore raised; 13,400 tons in reserves opened out; a machine house; parts of ma inery; implements, &c.
WILL BE SOLD on the 29TH INST. in the town of Karansebes

Hungary.

The first bid for the Coal Mines, 64,300 fls.; for the Chrome

for further particulars apply to
Dn. ALEXANDER VON ULLMANN, Budapest,
Curator of the Allgemeine Industrie Actien-Gesellschaft.

### LEAD ASHES.

WANTED, PLAN of the most approved FURNACE for REDUCTION of LEAD ASHES. Not to produce soft lead so much as to obtain all the metal out of the slag. Address, in first instance, "Tregenna," care of Messrs. S. Deacon and Co., Leadenhall-street, E.C.

CARN CAMBORNE TIN AND COPPER MINING
COMPANY (LIMITED).

WANTED, SIX HUNDRED SHARES for IMMEDIATE
DELIVERY.

DELIVERY.
State number and lowest price to R. C. SAUNDERS and Co., 37½,

North-street, Brighton.

WANTED, a SECOND-HAND ROBEY'S or other SEMI-PORTABLE ENGINE, 12 to 25-horse power, in good con-

Apply, with particulars, to W. G. ROBERTS, Cornwallis Crescent, Clifton, Bristol.

WANTED, a FEW CAPITALISTS to join in SECURING some very valuable GOLD MINING and LAND PROPERTIES, from which large profits can be made.

For particulars apply to Thomas Cornish, M.E., care of Mining Journal Office, 26, Fleet-street, E.C.

PRACTICAL MINING ENGINEER, who has had several years experience in various parts of Europe, America, and Africa, is OPEN to a RE-ENGAGEMENT. Thoroughly experienced in Rock Drills, Automatic Dressing Machinery, Pumping, Winding, Assaying, and Surveying. Speaks French and German. Unexceptional references. Age 41.

Address, "M. E.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

20 East Rose, 3s. 5d.
21 Organos Gold, 10s.
22 Ocaca Gold, 10s pd. 17s
22 Ocaca Gold, 10s pd. 17s
23 Organos Gold, 10s.
23 Organos Gold, 10s.
25 Old Shepherds, 11s. 6
25 Did Shepherds, 11s. 6
26 DENTE OF SMINERS, 10s Ocaca Gold, 10s pd. 17s
25 Old Shepherds, 11s. 6
26 DENTE OF SMINERS, 10s Organos Gold, 10s.
26 DENTE OF SMINERS, 10s Ocaca Gold, 10s pd. 17s
26 DENTE OF SMINERS, 10s Ocaca Gold, 10s pd. 17s
26 DENTE OF SMINERS, 10s Ocaca Gold, 10s pd. 17s
26 DENTE OF SMINERS, 10s Ocaca Gold, 10s pd. 17s
26 DENTE OF SMINERS, 10s Ocaca Gold, 10s pd. 17s
26 DENTE OF SMINERS, 10s Ocaca Gold, 10s pd. 17s
26 DENTE OF SMINERS, 10s Ocaca Gold, 10s pd. 17s
26 DENTE OF SMINERS, 10s Ocaca Gold, 10s pd. 17s
26 DENTE OF SMINERS, 10s Ocaca Gold, 10s pd. 17s
26 DENTE OF SMINERS, 10s Ocaca Gold, 10s pd. 17s
26 DENTE OF SMINERS, 10s Ocaca Gold, 10s pd. 17s
27 DENTE OF SMINERS, 10s Ocaca Gold, 10s pd. 17s
27 DENTE OF SMINERS, 10s Ocaca Gold, 10s pd. 17s
28 DENTE OCACA D London, E.C.

### MINE "E L U A L L A O," GUAYANA, VENEZUELA.

MINING OFFICES, 1, ST. MICHAEL'S ALLEY, CORNHILL,

### C. PASS AND SON, BRISTOL,

LEAD ASHES, SULPHATE OF LEAD, LEAD SLAGS, ANTIMONIAL LEAD, COPPER MATTE, TIN ASHES, &c., and DROSS or ORES containing COPPER, LEAD, AND ANTIMONY.

GEO. G. BLACKWELL,

26, CHAPEL STREET, LIVERPOOL,
HANDLES
MANGANESE, BARYTES, SPARS, and ALL ORES on SALE
or PURCHASE.

#### ASSAYING.

### EDGAR JACKSON, (Assoc. R. S. M., F. I. C.)

RECEIVES PUPILS, and ASSAYS ALL KINDS OF ORES. 106, QUEEN VICTORIA STREET, LONDON, E.C.

JOHN LYSAGHT (LIMITED), BRISTOL SPELTER WORKS,

BUYERS OF ZINC ASHES, ZINC OXIDE, HARD SPELTER, CALAMINE, &c.

MESSRS. J. AND J. BANNER, BROKERS, LEITH OFFICES, LIVERPOOL.

BUYERS AND SELLERS OF MINES, MINERALS, &c. COMPANIES FORMED ON EQUITABLE TERMS.

A. JONES, MINING ENGINEER,

GIJON (ASTURIAS), SPAIN.

Mines inspected and reported on. Assays and valuations effected.

Has on hand offers of Mines of Copper, Calamine, Blende, Phosphate
of Lime, Tin, Lead, Iron, Manganese, and Manganiferous
Iron Ores.

#### WOOD AND TREHERNE,

MINERAL BROKERS AND DEALERS IN MINING PROPERTIES, ROOM 55, GILFILLAN BLOOK (BRITISH VICE-CONSULATE), ST. PAUL, MINN., U.S.A.,

Offer to the English Investing Public rich developed and undeveloped Gold, Silver, Copper, Iron, and other Mines and Mineral Lands in all parts of the United States and Canada.

These properties have been placed in the hands of Messrs. Wood and TREHERNE for IMMEDIATE SALE.

Correspondence with this view invited from Capitalists and Promoters in London and elsewhere.

### MURRAY ASTON, MINING AGENT,

CHRISTCHURCH, CANTERBURY, NEW ZEALAND. Mines and other properties in any part of Australasia inspected. Reports by Government Geologists procured where required.

Terms very moderate, and expense of sending Engineer from England avoided. ADDRESS CABLEGRAMS, "ASTON, CHRISTCHURCH."

### RICHARD PROVIS,

STUD. INST. C.E., LAND AND MINE SURVEYOR, CAMBORNE, CORNWALL,

PREPARES MINING PLANS AND SECTIONS, AND UNDERTAKES GENERAL SURVEYS.

J. H. COLLINS, F.G.S., &c.,

CHEMICAL AND MINING ENGINEER, (Four years Chief Chemist and Metallurgist to the Rio Tinto Com-pany, 13 years experience in Cornwall, Author of numerous works on Mining and Mineralogy)

ADVISES ON GENERAL CHEMICAL AND MINING MATTERS, AND ESPECIALLY ON THE TREATMENT OF MIXED AND LOW-CLASS ORES,

Address-54, COLEMAN STREET, LONDON, E.C.

#### INTERNATIONAL INVENTIONS EXHIBITION, LONDON, 1885.

DIVISION I.-INVENTIONS. DIVISION IL.-MUSIC. HER MAJESTY THE QUEEN.

> PRESIDENT. H.R.H. The PRINCE OF WALES, K.G.

Applications to exhibit must be made on printed forms, which will be supplied on application to the Secretary, International Inventions Exhibition, South Kensington, S.W.

These must be filled up and returned on or before the 1st Nov.,

R. W. MARLBOROUGH, STOCK AND

29, BISHOPSGATE STREET, LONDON, E.C. (Established 30 Years),

20, Asankoo, 88,
25 Gorsedd, 28,
25 Birdseye Creek, 1083d
40 Hoover Hill, 58,
25 Birdseye Creek, 1083d
30 California Gold, 128,
30 California Gold, 128,
30 California Gold, 128,
30 California Gold, 128,
30 Collifornia Gold, 128,
31 Collifornia Gold, 128,
32 Collifornia Gold, 128,
33 Collifornia Gold, 128,
34 Collifornia Gold, 128,
35 Collifornia Gold, 128,
36 Collifornia Gold, 128,
36 Collifornia Gold, 128,
37 Kanpaga, 28, 23d,
38 Collifornia Gold, 128,
30 Collifornia Gold, 128,
31 Collifornia Gold, 128,
31 Collifornia Gold, 128,
32 Collifornia Gold, 128,
33 Collifornia Gold, 128,
34 Collifornia Gold, 128,
35 Collifornia Gold, 128,
36 Collifornia Gold, 128,
36 Collifornia Gold, 128,
37 Kanpaga, 28, 23d,
38 Collifornia Gold, 128,
39 Collifornia Gold, 128,
30 Collifornia Gold, 128,
30 Collifornia Gold, 128,
31 Collifornia Gold, 128,
32 Collifornia Gold, 128,
33 Collifornia Gold, 128,
34 Collifornia Gold, 128,
35 Collifornia Gold, 128,
36 Collifornia Gold, 128,
38 Collifornia Gold, 128,
39 Collifornia Gold, 128,
30 Collifornia Gold

HORACE RACE J. TAYLOR, 33, GREAT ST. HELEN'S, LONDON, E.O., STOOK, MINING, AND MISCELLANEOUS DEALER.

ESTABLISHED 1874.
BANKERS: CENTRAL BANK OF LONDON (Limited).

SPECIAL BUSINESS in the following:—
Akankoo, 8s. 3d.
Bratsberg, 27s.
Colombian Hydraulie,
10. 2d.
10. Gunnislake (Clitters), 9s, 9d. Home Mns. Trst. 18s 3 Leadhills, 3%. 6d. Lisbon-Berlyn, 9s. Marke Valley, 11s, 3d Mounts Bay, 3s. Montans, 40s. New W. Caradon, 3s Old Shepherds, 10s. 9 Ortlass, 23s. 9d. 10s. 3d. Carn Camborne, 9s 3d California Gold, 12s. Callao Bis, 9s. Chile Gold, 3s. 9d. Chontales, 4s. 8d. Colorado, 36s. Devon Consols, 82s. 6 Devon Friend., 2s. 3d. Bast Blue Hills, 5s. East Wheal Rose, \$8 5

Organos, 10s. 6d.
Port Phillip, 2s. 3d.
Panuicillo, 72s. 6d.
Potosi, 6s. 9d.
Roby, 12s. 6d.
Richmond, 71s.
Roman Gravels, 65s 6
South Devon, 5s.
United Mexican, 73s 6
West Crebor, 1s. 6d.
Wheal Orebor, 27s.
West Godolphin. 17s 6
Western Andes, 25½.

BUYER of Tolima A and B, Western Andes, Colombian, Orlias, and all mining shares whose mines are situated in the United States of Colombia. Early information from a special and reliable authority can be given on application as to these mines

een again
ment to
spirits as
low, and
mer, and
to 5s. per
n looked
and the
ustomed
the imcts an

, as far any ma-mness. 17. was

nality be ex-

New Coal-Liming Process.—For some time past an improved coal-liming process, the invention of Mr. W. J. Cooper, has been in successful use at the Tunbridge Well Gas Company's Works. It is claimed that by his process pure gas is obtained, a public nuisance avoided, and an extra profit secured to the gas company. The process consists simply in mixing 2½ per cent. of lime with its own weight of water, and adding to it the coal, thus giving 5 per cent. by weight of the quantity of coal to be carbonised. In other words, I owt. of I me and water is mixed with every ton of coal and charged with it into the retort. The coal used is New Pelton, with 2½ per with it into the retort, The coal used is New Pelton, with 2 | Ler

SE

al may

e any k

### ROYAL MINING ACADEMY AT CLAUSTHAL (GERMANY).

73RD COURSE OF LECTURES, 1884-1885.

THE LECTURES OF THE WINTER HALF WILL BEGIN ON THE 18TH OCTOBER, 1884.

Programmes to be had (gratis) of the Principal-

Dr. v. GRODDECK.

Counsellor of Mines.

### GEORGE ELLIOT & CO.,

(GEORGE ELLIOT & Co. since 1864, and previously GLASS, ELLIOT & Co., Makers of the First Atlantic Cable),

### WIRE ROPE MANUFACTURERS.

23, Great George St., Westminster, London,

BUTE DOCKS, CARDIFF.

SPECIAL IMPROVED PLOUGH STEEL,

PATENT STEEL AND IRON WIRE ROPES For Colliery, Mining, Agricultural, and General Purposes.

ROPES FOR ÆRIAL TRAMWAYS,

SHIPS' RIGGING.

COPPER LIGHTNING CONDUCTORS,

GALVANISED STRAND,

SPECIALLY FLEXIBLE ROPES, &c., &c.

Care is given to ensure the Ropes being constructed in the way most suitable for their particular work, and by the use of specially selected and tempered metal, the greatest possible uniformity is obtained.

DENT'S WATCHES CLOCKS.

NEW ILLUSTRATED CATALOGUE of HIGH-CLASS WATCHES and CLOCKS at REDUCED PRICES sent Post Free on ap-plication to E. DENT AND CO., Makers to the Queen, 61, STRAND, LONDON, W.C. or 35, ROYAL EXCHANGE, E.C.

### Notices to Correspondents.

OSCAR GOLD—"F. H." (Peterborough).—Your suppositions as to the relative position of purchasers of vendors' and of partly paid shares are erroneous and misleading. You are correct in stating that the vendors' fully paid shares can be bought for less than the shares 10s. paid. The price of the latter was called 15s. last week, or 50 per cent. premium, which indicates that at least someone supposes that the mine will make profits. Now, the division of 2125f. In all as dividend will place all shares on an equality; hence it becomes a question with a purchaser whether he will purchase the prospective right to a fully paid share free from further liability for 10s, or 12s. Ed., or whether he will give 15s for a share liable to 10s. cail. There is certainly less risk in purchasing the fully paid share, because if the 2125f. divisible profit be quickly earned, the transfer can be completed; if it be not quickly earned the 10s. cail must be paid, and the fully paid share will have cost the holder 25s. instead of 12s. 6d., while both will be equally unsaleable. It is believed, however, that the mine will speedily be able to pay the 1s. per share dividend, which will make the vendors' shares framsferable, so that there is no necessity to make invidious comparisons.

MEXERS' WAGES.—"H. K." (Manchester).—We shall be glad to give attention to a wething were manufactured.

invidious comparisons.

Mixens' Macga.—"H. K." (Manchester).—We shall be glad to give attention to anything you may forward for publication upon your own responsibility, but we could not at the moment recommend "a general advance of miners' wages," because the result of adopting such a recommendation would be that most of the mines now working would have to stop altogether, and the miners do not immediately raise miners' wages there will, within six months, not be a young man left working in the mines, as they will go to America, where they can get thrice the money and pleuty of meat to live upon." Now, is it not a fact that mining depression is as great in America as in Cornwall, and that the working miners are complaining that the labour market is so overstocked that they can excretely live? If a miner can improve his position, but all means let him do so; but let him obtain reliable information before acting. In many mines as present the salaries and wages of the executive and workmar are losing money every month they will advance wages, and thus increase their loss.

MIXE INSPECTION, AND PROMOTERS' PRACTICAL (3). Percent

increase their loss.

MINE INSPECTION, AND PROMOTERS' PRACTICAL (?) REPORTERS.—Science graduates and A.E.S.M.'s are no more infallible than other people; but they have at least the advantage of being systematically educated, and of having been informed of accretained fasts recorded by competent workers, and taught how usefully to apply the record. The so-called practical reporter is usually ignorant, conceited, and not always truthful as to the nature of what little experience he may have had. Few are interested in the personal squabble constabily going on between taught and untaught men, but no one should engage a man of either class until he has carefully and thoroughly studied Vol. LIII., page 303, of the Mising Journal. It requires something more than eating tinned tomatoes to make a tinman.—TRUTH.

vol. Lill., page 303, of the Manag Journal. To require something more chan eating timed tomatoes to make a timman.—TRUTH.

Mixer's Inch.—In Notices to Correspondents of last week there is an error (not in the salions, but in the class) in the calculations of the volume of water in a miner's inch. One miner's inches of water removes 1 ton of rock, 200 miner's inches per 24 hours should remove about 600 tons of rock. But in the average of studieing operations much less than 17 tons of water to the ton of rock will answer probably 10 tons is ample.—O. Harrey

Received.—"T. P." (Birmingham): Fully noticed, as desired.—"F. J. H."—

"R. B. and Co."—"F. H." (Occar): Never use foreign quotations, especially from a language you do not understand, nor poetry; all business matters can be expressed in plain English prose. You write: "Until that result in un fait accompil," which is neither French nor English; it should be: "becomes un fait accompil," which is neither French nor English; it should be: "becomes un fait accompil, and they are involved in mysters—"Nemzetköst hirdeteske felvettill iroda I. L.": Attended to—"S. B. D." (Portsmouth)—"J. A. M.—"S. F."

### THE MINING JOURNAL,

Bailway and Commercial Gazette.

LONDON, SEPTEMBER 13, 1884.

COAL-CUTTING MACHINERY.

Somewhat quietly and unobtrusively coal-cutting machinery appears to be making its way, although it has not been overpowered by the warmth of the support it has received from those the machines are intended to benefit. It is only within the last 15 or 20 years that coal-cutting machinery has been prominently brought under the notice of colliery owners, although the idea is certainly anything but a new one. So far back as 1761 MENZIES took out a patent for a pick machine, but it was not much thought of at the time. In repick machine, but it was not much thought of at the time. In recent years the Mersix Figure, of Leeds, have greatly improved upon the pick idea of more than a century ago, and their machines, with single and double picks, have been in most successful operation at collieries at West Ardsley, near Leeds, for a considerable time past. They have on an average done as much work in a given time as ten or a dozen miners, bringing the coal down in a large and marketable state, and as the machines are worked by compressed air, the exhaust

can be so utilised as to keep the place where the work is going on in a pleasantly cool state. But in addition to the pick machines several have been introduced upon a different principle, some of them consisting of a series of cutters arranged on a rotating wheel, and worked by compressed air. These scrape the face of the coal, and can be driven until the holing is from 3 to 4 ft. through.

One of the earliest of these machines was that of HURD and SIMPSON, but of which little has been heard of late. Another upon a similar principle was brought out by GILLOTT and COPLEY, and has been worked at the Wharnclife Collieries for several years. This machine has also been introduced of late into collieries in Derby, shire and Nottinghamshire, and with success; indeed, so successful have they been that Messrs. GILLOTT and SON have now a place in Barnsley where the machines are made, thus giving satisfactory proof of their efficiency. The machines of WINSTANLEY, on a somewhat similar principle, have had a fair run in Lancashire, and have done good work. The same may also be said asregards RIGG and MEIKLEJOHN's machine, which have the cutters also arranged on the periphery of a rotating disc, and out out a groove similar to what is made by a circular saw. BAIRD's well-known Scotch machine has done some good work, the cutters being fixed to a travelling pitch chain, and working with great ease. The new American machine, the Lechner, has been highly spoken of, and is mounted on a revolving bar driven by pitch chains. We are not aware that as yet it has been tried in this country, although on the other side of the Atlantic it is said to have been a very great success, as is the case with many American inventions which we on this side only know by report. As before stated, our English machines are now making steady progress, and are found highly advantageous in tolerably thick seams where there is a long face, so that the work can be carried out on the longwall system. In thin and hard seams they are also most advantageous,

### MUTUAL INTERESTS, AND COMMERCIAL REVIVAL.

The labour difficulty is still the vexed question of the day. In several parts of the country labour is arraigned against capital, and capital against labour. The breach has been, and still is, subsersive of the best interests of both. These internecine struggles have driven from our shores millions of capital in the shape of manufactured goods, and thousands of our most skilled artizans and able-bodied men have rejustantly sought employment in other lands, and excited men have reluctantly sought employment in other lands, and carried their practical knowledge into competition with the British manumen have reluctantly sought employment in other lands, and carried their practical knowledge into competition with the British manufacturer. The warfare to-day is as open and defiant as ever. The severe competition and low prices compet the masters to enforce a reduction of wages, whilst the miserable pittance earned in some of our great metallurgic and mining districts is scarcely sufficient to keep the man and his heavy family from starvation. The efficiency of capital and labour must be seriously impaired when a considerable portion of their strength is spent in such internecine contest. But how to reconcile these interests, and produce harmony, is the great problem which has hitherto taxed the best efforts of philanthropists of all classes, and is one upon which the future of our great mining and manufacturing interests still depends to a very great extent. Employer and employed must feel that they have a direct interest in the success of the work in which they are engaged before a permanent basis of prosperity can be established and before the English manufacturer will be able successfully to cope with the gigantic strides which are being made by other nations. Many of the principal working men's advocates contend as a solution of all strikes and trade difficulties that the working classes should have more direct interest and benefit in the wealth which they create than they have at the present moment. Granting there is a good deal in this contention, those who find the capital and the brains ought to be well and highly remunerated; but the contention of the working classes is that the employers receive too large a return for their capital and s'till as compared with labour. Now, although we admit that there are instances where large gains are still made by capitalists, and where the employees are not proportionately rewarded for the hard physical toil and long hours of labour imposed upon them, still, on the other hand, there are too many cases where capitalists have lost every shilling they once possesse

"Verax," in the Times of Sept. 4, in alluding to the strike of the colliers in the South Staffordshire district, and which has continued since June 28, shows that the rate of wages, all things considered, is 5s. 1d. per day of eight hours; and he states, as a fact, that "we and many others in our district have been keeping our works open for some years past not only without making any profit but at con-

for some years past not only without making any profit but at considerable yearly loss."

But how can this vitally important question be permanently settled, and that upon a basis which will be satisfactory to both parties—the capitalists, on the one hand, and the representative of labour on the other? We would premise by saying that no good can possibly come by such tall talk as the "tyranny of the money bags," and "all wealth is due to labour, therefore to the labourers all wealth is due." The great bulk of the manufacturers of this kingdom work as hard and as long—not physically, of course, but mentally—as any labourer, to say nothing of the anxieties and worries of business; and this increasing toil is not altogether for their own aggrandisement, but to avoid bankruptcy, and provide a continuity aggrandisement, but to avoid bankruptcy, and provide a continuity of work for those in their employ. The proprietors of large works—factories, workshops, and mines—are, therefore, justly entitled not only to a fair and adequate return upon the capital invested in the erection of the machinery and the keeping the works in order, but also the "brain capital" which a hard and continuous superintendence involves. As we have said, we discard as not worth discussing the volves. As we have said, we discard as not worth discussing the cant that "all wealth is due to labour." Labour requires wealth and brains to provide its means of existence. The interests of both are mutual, and one cannot possibly prosper without the other benefiting.

Such being the case cannot some means be devised by which both interests may become more closely interwoven? We think there can. At the present moment the great cry of the agriculturist is

can. At the present moment the great cry of the agriculturist is that every agricultural labourer should have the right to claim a certain amount of ground for his own cultivation. Some of the more democratic would enforce by State enactments such partition of land; and, extending the basis of operation, would contend that every person employed in a manufacturing, or mercantile, or trading concern should have the right to invest a certain portion of his arrives in the confidence of the technique of the receive his property. savings in the capital of that concern, and to receive his proper dividend on that investment. But we have yet to learn by what right the State should interfere between capital and labour. But even if the right were given the compulsory interference would be inimical to the welfare of both. What cannot, or should not, be enforced by Parliamentary enactment wears a very different com-plexion when mutually adopted. The Limited Liability Act was a great and bold step in this direction. Until the passing of this Act

little or nothing had been done by the Legislature towards facing ing the participation of the operative class in the result of the labours. But difficulties in the practical application of this account apparent, and it has been left to the Messrs. Takethan became apparent, and it has been left to the Messrs. Takethan became apparent, and it has been left to the Messrs. Takethan develope, after much painstaking labour and anxious consideration as participation by the employees in the profits of the year's works avoids the difficulties and dangers which would arise under their mited Liability Act. The scheme initiated by this firm is a granting of a certificate of indebtedness, or bond, setting forth is the bearer is entitled to interest upon it at the same rate as a dividend declared by the company upon its ordinary shares, and case the bearer dies before the end of the year for which the bear is good his family is entitled to the value of the bond—501. It bond states on its face that it is of value only to the person was name it bears, and is unalienable, and ceases to be of value we the holder leaves the service of the company. Here, then, is a put tical solution, in our opinion, of the long-vexed question below capital and labour. Both interests become at once mutual—was shareholder then participates in the advantages and responsible of his position. The working man feeling and knowing that is greater the success and prosperity of the work the greater is his a dividual share of the profits will work far more contentially be discountenanced, and the best return upon capital and labour industriously. Idleness, waste, and improvidence of every kindwell be discountenanced, and the best return upon capital and labour in the benefits of which we can now form but imperfect concentrates the benefits of which we can now form but imperfect concentrations to the Messrs. Tangyrk, therefore, belong the credit of her profite inaugurated by this eminent firm put to far greater test our great manufacturing and commercial in little or nothing had been done by the Legislature towards faci

#### SCOTCH PIG-IRON WARRANT MARKET.

Mr. W. Wilson (Glasgow, Sept. 11) writes:—The warrant make showed some improvement in the course of last week, but selin latterly prevailed, and the price again gave way. The long continued depression of the trade, and unremunerative prices have made the discontinuance of production at certain works almost imperating. Such, at least, has been the talk of the past week, although it is an expected that anything of this kind will happen just immediately. Shipments are fair for the week, but still compare unfavourably, I furnace has been lighted at Carnbroe, making the number blowing 95: 880 tons were taken out of store here last week, while 166 ton were taken out at Middlesborough.

were taken out at Middlesboro	ugh.						. 1040
Thursday, Sept. 4. Fr.	iday, Sep			Mo	nday, 8	pt.	1
41/7, 41/8, 41/5%, 41/8 41/6				41/	5%, 41/6	41/	5
	nesday, Se			Thu	rsday, S	ept.	11.
41/4%, 41/5 41/6	1884	1/5	1883.	9	1/51/2, 41	/61/6	
Price of Scotch Warrants, Sept. 3	41/536	***	46/3	***	50/	***	1881, 47/h
Furnaces in blast in Scotland do	95	***	114	289		420	110
Iron in store at this date	585,012	***	585,927			***	SELEC
Shipments of Scotch pig-iron for tweek ending Sept. 5	11,568	100	12,894	000	10,629	***	14,20
Do. since beginning of year	386,376	***	455,752	***			331,127
Price of Middlesbro', No. 3, Sept. 8	36/3		39/	010	44/	200	34
Furnaces in blast Middlesbro' dist. Middlesbro' Iron Imported at)	98		117	***	120	***	113
Grangemouth, week ending	5,313	***	6,140	4+3	6,533	194	4,80
Do. do. since beginning of year	177,788		184,485	400	157,594	*** 1	207,72

### PALMER'S SHIPBUILDING AND IRON COMPANY.

This company has just issued their report and balance-shest for the 12 months ended June 30. The subjoined table, prepared by Mr. S. N. CHALLONER, of Grey-street, Newcastle-on-Tyne, showth

		et profits fo the year ending June 20,	pe	per nnum	8,	Reserve fund.	6	ritten off for lepreclation and extensions.		
1875		£14,054	***	nil		nil	***	£10,000		£4,948
1876	*****	loss 35,48	5	nil		nil	***	nil	***	30,5371
1877		23,550	***	mil	***	nil	***	nil	***	6,986
1878	*****	53,675	***	3	***	nil	***	5,000		10,162
1879		44,108		3.	***	£20,000	***	6,209		1,035
1880		56,565	***	4		32,000	***	9,000		566
1881		87,288		6	400	50,000	418	15,000	0.09	801
1882		79,344	***	6	***	60,000	***	15,000		1,093
1883		198,770	***	84	***	120,000		60,933		2,356
1884	*****	126,938	***	6	***	150,000		25,000	***	5,244

The present management commenced from 1876, the program made since that time shows that the company should always be able to have earned a dividend.

### QUICKSILVER.

To Corinto-Hellman Bros. & Co. ... Total since Jan. 1, 1884... 11,096

lark.

an an

give h Whomm

pen negati tion, a acted,

direct and it tween it is to

risk:

MAXIM-WESTON ELECTRIC LIGHT.—The managers of Covent 6st MAXIM-WESTON ELECTRIC LIGHT.—The managers of Coreal disden Theatre, being impressed with the many advantages of electric 
illumination, have again decided to adopt it during this sensipromenade concerts, and have entrusted the installation to its
Maxim-Weston Company, the work being carried out on their beind 
in a thoroughly efficient manner under the personal superintendend 
of Mr. Hugh Watt, the managing director of the company. In 
systems of this company are complete in themselves—that is to 
they comprise special generators and are and incandescent lamp, 
and all requisite appliances, which have now been in use for about 
five years, and given every satisfaction. In the installation now sade notice the generating plant is situated on the ground floor justoms side the Floral Hall, and comprises three Maxim and three Western generators. The current from the three generators could supply as Maxim incandescent lamps, those in use being arranged in the sale torium and over the stage. The Weston machines could supply corrent to 42 Weston are lawrent that have not a light end torium and over the stage. The Weston machines could supply carent to 42 Weston are lamps; the lamps each give out a light equivalent of 1500 candles, actual. The positions of the lamps have been carefully selected, and give a very fine effect, more especially in its auditorium and over the stage, while the Floral Hall is entirely lighted by arc lamps. The Maxim generator in outward appearance respected by the Siemens; it differs, however, entirely from that machine is the construction of its armature, and the method of coupling of the coil differs from that employed in the Gramme. We could not the admiring the even and smooth working of these machines, the spaining at the commutators being reduced to a minimum—in fact, samely ing at the commutators being reduced to a minimum—in fact, some perceptible. The principal feature of the new Maxim incandes lamp lies in the preparation of its filament by a new process patented, for which the company claim 20 per cent, more light the same power than any other known lamp. The perfect steading and purity of the lights and even brilliancy of the filament on the process of this large installation. bute in no small degree to the success of this large installation.
Weston are lamp has long been known as remarkably steady
action, and the simplicity of its construction renders it epot suitable for out-door illumination. All readers of the Mining Jer

1884

ds fac ANGYES

m is "a forth the rate as the res, and in the bod! This is not a foot a

abour the ity to en. industrial

to see the er test by I that the

nt market ut sellen continued made the peratire it is not ably, A

1801. 47/11 119 582,917

10,111 390,121 34/ 111

4,60

207,72

of may not be aware that Covent Garden is one of the largest learner in Europe, the cables employed in this contract amounting a several miles in length, and we may add that the whole plant has now been in operation for several weeks without the slightest hitch fany kind. We can, therefore, congratulate the company on this mortant addition to their long list of successful installations.

### PROGRESS OF COMMERCE.

The Trade Returns for August issued this week were most unsweather, showing a falling off all round; but as the decrease in arbine exports was far outbalanced by the reduction in the imports the position is not so bad as it otherwise would have been, thile so far as regards the decrease in the arrivals of breadstuffs, it perhaps, the most important and encouraging point shown in the agreen returns. British and Irish exports aggregate for the month 9,802,000%, or about 7 per cent. less than for the corresponding reduced of last year, while the imports of 29,610,000% exhibit a reduction of 184 per cent., and the reshipments of colonial and foreign reduce 44 per cent., with a total of 4,047,000%. For the eight souths the exports have declined about 14 per cent., and the imports of per cent.

produce \$4\) per cent.

With regard to the exports there is nothing particularly favourable of note, but the shipment of horses and other animals has increased, and there has been great activity in telegraphic wire, &c., an export of over 400,000. Worth having been made, partly to China, many povements shown in the returns being traceable to the influence of he war there. The heaviest decrease is apparent in yarns and tex-life goods, chiefly cotton, the total decrease being fully 750,000. Welligs of the shipments of coal have fallen off \$\frac{3}{2}\$ and \$6\frac{1}{2}\$ per cent. respectively in quantity and value, and iron and steel\_ighnich exhibit diminution in every branch, \$2\frac{5}{2}\$ per cent. in both respects. Mahinery and chemicals have been shipped less freely, but for the sight months are the only items which, together with raw materials, and at any increase worth mention.

Of imports those of all corn and raw materials show the chief regard to barley, which shows an increase of \$6\text{ per cent, in quantity, and \$2\text{ per cent, in value.}\$ Wheat has fallen off 14 and 13 per cent, respectively in quantity and value, and for the 12 months ince last harvest the receipts have been \$1,803,000 qrs., against \$1,883,000 qrs. for \$182-3\$, and \$14,272,000 qrs. for \$182-2\$. The strivals of meal and flour, however, have declined. In raw materials the decrease has been principally in wool, raw cotton, and jute. Articles subject to duty show an increase, except as regards tea and office. Sugar has fallen off 25 per cent. in value, notwithstanding a largely augmented arrival. The only exception to the general decline in the reshipments is in wool, which exhibits a considerable increase.

As regards the metal interests, the result for the month is through

As regards the metal interests, the result for the month is through out very unfavourable, for values have decreased in greater ratio than quantities, and the only satisfaction is to be found in the fact that he same feature characterises the imports as well as the exports. As respects the former, copper ore has arrived less freely by 30 per cent.; but the value has only decreased 16 per cent., while regulus, although maintained in quantity, fell off 22 per cent. in value. The however, while 46 per cent. smaller in quantity, was 50 per cent. worse in value. The receipts of lead were about the same as last year; but the value, nevertheless, was \$15 per cent. lower. The reshipments of tin improved, but with a decline in value, while those of copper decreased in both quantity and value. Among the exports of metals there was an augmentation of 15\frac{3}{2} per cent. less, and the value 32\frac{1}{2} per cent. less, and that of lead, despite a slight increase, represented a diminished value. As regards the metal interests, the result for the month is through

#### CHARTERED ACCOUNTANTS, AND THEIR VICTIMS. THE VICTORIA GOLD MINING COMPANY OF VENEZUELA.

THE VICTORIA GOLD MINING COMPANY OF VENEZUELA.

The irreparable injury inflicted upon businesses, especially when in the hands of other than an individual proprietor, by the ignorant, though systematic, interference of chartered accountants has more than once been referred to in the Mining Journal, and if any further evidence of the truthfulness of the assertion were required it is abundantly supplied in the vast improvement, whether regarded from the bankrupts, or from the creditors point of view, which has been effected by the introduction of Mr. Chamberlain's Bankruptcy Act. Estates which were nursed and manipulated for seven years—in fact, until there were no more assets to appropriate as fees—by the private chartered accountant are now wound up, and the dividends distributed to the creditors in about as many weeks, whilst the expenses chargeable upon the assets by the officials of the Court only amount to a few pounds, and are proportionately small as the estate to be realised is extensive. The Bankruptcy official, unlike the merely professional trustee, has nothing to gain by prolonging the process of liquidation, and being under the direct control of the Court is equally anxious to give satisfaction to all concerned. The assecuating of the Waddells, and some others of the same class, and contraction of several other respectable (?) City firms, who lived on the unfortunate to an extent which has caused them to remove from lixurious and expensive to mean and unassuming offices was the direct result of compelling them to give something like a reasonable secount of the moneys which came within their control, and if the present Government had given us nothing but the new Bankruptcy Act they would certainly be entitled to the thanks and confidence of the entire community.

But if the interference of the chartered accountant be objection-

Act they would certainly be character to the character of the entire community.

But if the interference of the charactered accountant be objectionable when his sole crime is, that he is, as of necessity he must be, ignorant of the internal details of the business with which he medianomated the company of ignorant of the internal details of the business with which he meddles and muddles, how really culpable he is when he descends still
further from the standard which is supposed to be adopted by the
ptofession to make damaging insinuations against a company about
which he knows nothing beyond what can be learned from a glance
at the printed balance-sheet. The company which is made the victim in the present case is the Victoria Gold Company of Venezuela,
about which we will say nothing favourable or unfavourable, because,
having no better premisses than the chartered accountant for arriving
at a conclusion, it would be unfair to do so. This chartered accountant—we will call him Mr. Zero—who attempts to stab in the
dark, is wise enough to conceal his name, perhaps from prudential
motives; and he is compelled to admit, by which means he avoids an
action for libel, that the company's accounts are correct in matter of
form, though had they adopted Mr. Zero's peculiar eccentricities
they might have been prepared differently. It must be recollected,
however, that Zero's eccentric balance-sheet does not correspond
with the form absolutely ordered to be followed by the Act of Parliament, and that it is in the highest degree unsystematic, even as
an analysis—it is, indeed, fortunate for him that he did not put his
name to his unique production, or he might indeed have been a zero
in the eyes of those who, not having yet been injured by his venom,
give him employment.
Whether any company ought to be permitted to allot shares and

whether any company ought to be permitted to allot shares and commence business until three-fourths of its capital is subscribed is open to question, and the Mining Journal has always urged the negative in the interest of legitimate mining; but the proposed restriction, although it has been before Parliament, has not yet been enacted, and, in truth, the practice of allotment at the discretion of the directors is almost universal. As between the company so allotting and its oreditors the principle is doubtless objectionable, but as between the shareholders themselves it is another question—sometimes it is to their advantage, sometimes to their disadvantage. In the case of a rich mine it is obvious that partial allotment and partial development might enable the early shareholders to acquire a larger interest, and thus secure greater profit to compensate for their early risk; but this need not as present be discussed. Taking Mr. Zero's figures, and using them in conjunction with the fact that the nominal capital is 200,000L, the company's resources at the present time are about 99,258L 10s,—that is to say, its liabilities are 1846L 8s. 11d., and to meet this it has authorised but unrealized capital, 100,761L 10s., and what Mr. Zero calls available assets (cash at bank and debtors),

3431. 8s. 10d., together with calls unpaid, 44571. 10s.=105,5621. 8s. 10d. Of course, this would be applicable to pay any balance of purchasemoney that may be due and to provide working capital; so that the concern is not in a worse position than many others which have surmounted their difficulties and become prosperous.

That sanguine statements are made in prospectuses is well-known; indeed, if it were not for the anticipation of those enormous profits which have made mining celebrated as an investment, no one would embark in it, and, where the mines are fairly and judiciously worked, the greatest disappointment is usually in the matter of time—few realising that rock cannot be cut up like cheese, and that in mining, as in other businesses, profits cannot be earned without work and capital. In the case of the Victoria Gold Mining Company of Venequela less than 20,0001. in all has been expended for raising the capital, plant, and development, the latter term obviously meaning dead-work, salaries and wages, and expenditure at the mine, and two years' management and London expenses. Whether the directors might have done better with the funds from time to time at their command cannot now be demonstrated; but enough has been said to show that Mr. Zero has wilfully and venomously misrepresented the company's present resources, and done his utmost to injure an enterprise which is certainly no less promising than when the presentshareholders subscribed, and which may yet satisfy all concerned. There is a certain kind of algebraical problem, in solving which the same quotent is obtained, even if the dividend and divisor be interchanged; but in that case the result is always accurate and reliable, whilst apparently accurate, they are unreliable and intentionally misleading.

MINING IN DERBYSHIRE UNDER THE DERBYSHIRE MINING CUSTOMS AND MINERAL COURTS ACT OF 1852. No. V .- BY W. NINESS, M.E.

No. V.—BY W. NINESS, M.E.

That portion of the Hundred of the High Peak called the King's Rield, otherwise the King's Fee, is supposed to have been the property of the Crown from the Norman Conquest, as it was about that time and for long afterwards in the same custody with the castle (from which Castleton takes its name), and the Domesday Book mentions three mines at Wirksworth, and one in each of the manors of Crich, Ashford, Bakewell, and Mesterford. The King's Mine at Wirksworth was granted to Robert del Don by Edward I., that of Crich, which had been granted by King John to Hubert Fitz Ralph, was confirmed by Edward II. to Roger de Belers in 1325.

As it is indisputable that from time immemorial miners have claimed and exercised the right to mine within the King's Field,

claimed and exercised the right to mine within the King's Field, subject to certain ancient customs, and upon paying certain duties to the Crown, and there is nothing extant to prove the origin of these customs, though attempts have often been made to do so, it is reasonable to suppose that the miners originally had the sole claim to the mines, as being the earliest workers in the land when the King's Field was in a wild and uncultivated state, and as the land became enclosed and entireted and the farmers numerous the

King's Field was in a wild and uncultivated state, and as the land became enclosed and cultivated, and the farmers numerous, the more difficult it became for the miners, until within half a century or so, to maintain doubtless only their just and equitable rights.

I shall now deal with the first division of the Act, which as termed therein is a schedule of articles and customs by this Act established. The first clause of the Act, after giving the short title of the Act, states "that the schedules to this Act shall be considered part therefs".

Article 1.—It is lawful for all the subjects of this realm to search for, sink, and dig mines or veins of lead ore upon, in, or under all manner of lands, of whose inheritance soever they may be (churches, churchyards, places for public worship, burial grounds, dwelling-houses, orchards, gardens, pleasure-grounds, and highways excepted), but if no vein of ore be found, or if the founder's meres be not freed as provided by the 11th article, and the person making search abandon it for fourteen days, the land must be levelled and made good by the person making the search within the space of twelve clear days after the expiration of the said fourteen days, or the owner of such land may level and make good the same, and recover the expenses thereof from the miner in an action of debt in the small debt barmote court or in the county court: Provided always that nothing herein contained shall prevent or hinder the miner from following and working his vein, and searching for and Article 1.—It is lawful for all the subjects of this realm to search miner from following and working his vein, and searching for and getting lead ore under such excepted places as aforesaid at a lower depth than 15 yards from the surface; but in case by so doing he shall damage or injure any such excepted places, or the surface thereof, the owner or reputed owner or occupier may recover from such miner compensation for such damage or injury, by action in the county court if the damage shall not exceed 50l., or otherwise by action in the superior courts; but in case the owner or reputed owner or cocupier of such excepted places as aforesaid apprehends that such working is carried on at a less depth than 15 yards from the surface, or will endanger the security of such excepted places, the steward and grand jury shall have power to suspend the workings of such veins, or to direct the working thereof, so as to prevent such damage."

As regards those persons to whom the Act applies, there is nothing selfish in this article, as it makes it lawful for not only persons in the county of Derbyshire, but "all the subjects of this realm to mine in or under all manner of lands of whose inheritance they may be."

This custom is the most ancient of the Derbyshire mining customs

in or under all manner of lands of whose inheritance they may be." This custom is the most ancient of the Derbyshire mining customs and unique, inasmich as there is nothing like it extant in connection with mining in any other county, giving as it does the same amount of power to whom it applies. Neither the Forest of Dean Act (1 and 2 Vict. c. 43) or the Stannary Acts, which are very nametous, do not give anything like the power this Act does to the miners over the landowners, or the same advantages in other ways.

As a rule, it is the miners' own fault if when searching for a vein "no vein of ore be found," as the course of the veins in this district are very regular, and there is little difficulty in finding them. Formerly the miners were not required to level and make good land in case of abandonment. "The Compleat Mineral Laws of Derbyshire," written in 1734, states that if land was not wrought according to the custom of the mine the owner of the same may fill it again at his will and pleasure. Hardy, who wrote a few years later (1748), confirms this custom. Miners were supposed to fence their workings to protect cattle from injury, but this in any case they would now be compelled to do, by the ruling of the Metalliferous Mines Act. This article in itself, unless the whole of the land within the jurisdiction of the Act was owned by the miner, could not give him more power, for although under certain restrictions it excepts such places as churches, churchyards, gardens, &c., from being mined in or upon, it gives the miner power to mine even under these places at a depth of 15 yards, which is deep enough for all practical purposes. Nor can anyone make a garden or plant trees to evade the operation of the article, as in the deep enough for all practical purposes. Nor can anyone make a garden or plant trees to evade the operation of the article, as in the case of Gilbert v. Tomison, 4 D. and R. 222, which was trespass for case of Gilbert v. Tomison, 4 D. and R. 222, which was trespass for breaking and entering a close of the plaintiff called a garden, to which the defendant pleaded the immemorial custom to search for minerals within which the locus in quo was situate (gardens excepted). It being proved that the locus in quo had been planted with shrubs within the last six years, and with potatoes just before the trespass. The Court of Queen's Bench held it to be a garden within the meaning of the exception, notwithstanding it was urged. within the meaning of the exception, notwithstanding it was urged upon the courts that the evidence was too slight to bring the locus in quo within the exception of the custom, which should be limited que within the exception of the cumon, within the exception of the cumscribed by such as were by ancient gardens only, and not circumscribed by such as were obviously made in modern times for the purpose of evading the operation of a custom in which the public is concerned. Not even in any other country than Great Britain has the miner such power given him as does this article, for without preliminaries of any kind he can at once commence mining operations in whatever place he may select within its ruling. The too often great delay in drawing up leases, and the fearful cost of doing so, under this Act is dispensed with, as no lease is required, simply an entry in the barmaster's book. The land-owner under the raling of the Act can claim no land damage, and if the dues termed in the Act lot was paid on profits the miner in Derby-shire would have nothing whatever to complain of, and would in fact stand in a better position to make the most of his article than those of any other country.

In one section of the county, owned by one of the most liberal of England's noblemen, His Grace the Duke of Rutland, K.G., represented by Mr. R. W. M. Nesfield, J.P., Bakewell, the miners asked to have the dues lowered, and his grace at once, through Mr. Nesfield, more than complied with their request by giving them the whole of the dues. Such a noble act as this ought not to pass unnoticed, which with many others of a similar nature have endeared his grace to the miners of the county, and with whom his name will ever be a household word.

The Derbyshire miners stand in an enviable position, which is due only to their own exertions, otherwise they would be going through the same grinding process as many of their brothers in different parts of the county, as before the Act became law they had uphill work to maintain their rights and privileges, but they did so in spite of the tremendous opposition they had to contend with, and it is much to be regretted that the low price of lead prevents them to a much greater extent than they do at present from the enjoyment of the unexceptionable facilities they certainly possess. There used to exist an old custom in Wirksworth to dig lead in another's soil as far as the miner could throw his mattock.

### RYLAND'S DIRECTORY.

Although a purchaser may be fairly well satisfied with the iron or steel he is in the habit of using, competition is now so active, and the science of metallurgy has been so developed that metal especially adapted to each particular purpose is so readily produced that it is essential that the consumer and producer should be brought into the closest communication with each other—indeed, there are many who attribute the present trade depression to the prejudicial induspres of

closest communication with each other—indeed, there are many who attribute the present trade depression to the prejudicial influence of agentsland middlemen—and there is probably no other volume which, so far as the iron and steel trades are concerned, facilitates this as RYLAND's Iron, Steel, and Allied Trades Directory (published by the proprietors at Union-passage, Birmingham), the new edition of which, with engravings of brands and trade marks, has just been issued.

The iron, steel, and tin-plate section has been greatly improved by stating the sizes of iron or steel rolled, and giving a new and enlarged classification of the different kinds of pig and manufactured iron and steel, and a corrected list of brands and trade marks. The rest of this section is carefully corrected, and with the insertion of all the new works started since 1881, it will be found a true guide by which every active iron, steel, and tin-plate works of the United Kingdom can be communicated with, either by post, telegraph, or rail, and in it found the brands and trade marks, descriptions and qualities, plant and capacity, managers and agents, of the iron, steel, and tin-plate trades. The allied trades section has been compiled with the same care as the first park, and is, it is believed, the first directory published of bona fide manufacturers. The two parts combined now contain the names of all the actual makers of iron and steel, and the names also of the buyers of iron and steel, which the term allied trades includes; added to this the editors have given another section commissing the

names of all the actual makers of iron and steel, and the names also of the buyers of iron and steel, which the term allied trades includes; added to this the editors have given another section comprising the iron, steel, and tin-plate merchants, and recognised agents. They have been engaged on this for a long time, and experienced agents have visited almost every district before our actual canvassing took place. They have used more than the ordinary means of ascertaining that the names they give are actually what they are represented to be. Where necessary, and this is especially so in South Staffordshire and East Worcestershire, they have not only given the postal address of the towns, but also the nearest railway station and the tram route; the value of this information will be seen further when it is stated that in only a very few cases does the postal address indicate the situation of a town sufficient to be of any use to a traveller. For instance, Sedgley is in Staffordshire, the postal address being "near Dudley, Worcestershire." The postal address "West Bromwich" would be quite misleading to a traveller, as the principal works in this district lie round Albion, Swan Village, and Great Bridge stations. This is the case throughout the whole of South Staffordshire and East Worcestershire.

From the manner in which the information has been collected no doubt need be entertained as to its reliability, whilst the various

doubt need be entertained as to its reliability, whilst the various arrangements—according to trades, to districts, and to brands—which are embraced in the Directory adapts it to the requirements of all classes, and permits of its application to numerous separate purposes; it is altogether an invaluable commercial compendium, and will be widely appreciated.

### HOT BLAST, AND ECONOMY IN THE BLAST-FURNACE.

HOT BLAST, AND ECONOMY IN THE BLAST-FURNACE. At a meeting of the South Staffordshire Institute of Iron and Steelworks Managers, at Dudley, on Monday, Mr. A. E. COWPER, of Middlesborough, read a paper on this subject. The wide adoption of the system in the North of England had led the Staffordshire furnace proprietors to enquire more closely into its suitability for South Staffordshire, where at present only a few establishments have adopted it, amongst others the Spring Vale Furnaces of Mr. Alfred Hickman, where the pigs are obtained for the New Staffordshire Steel and Ingot Company's Works.

In the discussion which followed the reading of the paper, the general opinion was in favour of the stoves. The Chairman, Mr. Hudson (President of the Institute) said they had two furnaces—one with the temperature at 900°, and the other at 1500°—and they found the difference in favour of the hot-blast stove to be from 3½ to 4 cwts. of coke to 1 ton of iron. Moreover, the coal and slack, which

found the difference in favour of the hot-blast stove to be from 3½ to 4 cwts. of coke to 1 ton of iron. Moreover, the coal and slack, which amounted to 6d. or 9d. per ton of iron produced by the iron pipe stove was entirely saved, since no coal or slack was needed in the hot-blast stove. The only repairs necessary during eight years of use had been one change of the gas valves and an occasional change of the hot-blast valves. In reply to Mr. Spurgeon as to what was the smallest height and diameter which would admit of an efficient working of these stoves, Mr. Cowper stated that he had stoves at work in Switzerland where the dimensions were only 15 ft. diameter and 28 ft. high. The cost of erecting a pair of stoves suitable for

and 28 ft. high. The cost of erecting a pair of stoves suitable for a furnace of 20 ft. diameter and 54 ft. high would be about 2000t., and the royalty was 300t.

The CHAIRMAN said that with a pair of stoves designed to work one furnace and to make 350 tons of iron, they had blown two furnaces and made over 500 tons. They had made from one furnace as much as 300 tons of Staffordshire mine iron with a consumption of between 17 and 18 owts of soft coke por ton of iron, and this with as much as 300 tons of Staffordshire mine iron with a consumption of between 17 and 18 cwts. of soft coke per ton of iron; and this with a furnace only 50 ft. high. In answer to further questions, Mr. Cowper showed a simple apparatus, consisting of a small gun and a knife-jointed rod for efficiently cleaning the stoves. The bricks never melted or cracked, or got spoiled in any way. He had bricks which had been at work seven or eight years, but which were as yet quite sharp. If the ironmasters of Staffordshire would go into Yorkshire, and see the hundreds that were there in operation they would have many erroneous opinions about the stove corrected. It was not absolutely indispensable to have a close-topped furnace. With a It was ... With a have many erroneous opinions about the stove corrected. It was not absolutely indispensable to have a close-topped furnace. With a chimney tall enough it could be worked with the open-topped furnace. Mr. WALKER was afraid the Cowper stove would not work well in Staffordshire, because the Staffordshire coke was so soft and friable.

In some cases of high furnaces the soft coke bottoms would not bear their burdens, but got crushed, and ran like sand, even whilst workthe some cases of high furnaces the soft coae bottoms would not beat their burdens, but got crushed, and ran like sand, even whilst work-ing without the hot blast. Now, when the hot blast was put in from the Cowper stove there was no necessity for so much coke, and con-sequently the coke bottom was reduced in thickness. Still less, therefore, would it now bear its burden when the Cowper stove was

Several members thought the difficulty theoretical only, and the

Several members thought the difficulty theoretical only, and the CHAIRMAN quoted instances in which the stove had been used with success with tolerably high furnaces and soft coke.

The Institute passed a hearty vote of thanks to Mr. Cowper. It was intimated that his paper, and the discussion which followed would be printed for circulation by the Institute, and that the policy of securing addresses by men of Mr. Cowper's status in metallurgical circles would be continued.

INTERNATIONAL INVENTIONS EXHIBITION.—The latest date for ending in applications for space has been extended from Oct. 1 to

SEI

o late

### Registration of New Companies.

The following joint-stock companies have been duly registered:

THE ARGENTINE STEAM LIGHTER COMPANY (Limited).—Capital 50,000%, in shares of 10%. To carry on in that portion of South America the business of ship, barge, and lighter owners, &c. The subscribers (who take one share each) are—G. Mott, Liverpool; W. Holland, Liverpool; C. W. Jones, Liverpool; E. B. Dunning, Liverpool; H. Stokes, Liverpool; A. Cook, Liverpool; G. H. Melly, Liverpool

Holland, Liverpool; C. W. Jones, Liverpool; E. B. Dunning, Liverpool; H. Stokes, Liverpool; A. Cook, Liverpool; G. H. Melly, Liverpool; H. Stokes, Liverpool; A. Cook, Liverpool; G. H. Melly, Liverpool; H. Stokes, Liverpool; A. Cook, Liverpool; G. H. Melly, Liverpool.

THE LINTHURST AND BARNT GREEN BRICK, QUARRY, AND TILE MANUFACTURING COMPANY (Limited).—Capital 20,000L, in shares of 10L. To acquire a property situated at Linthurst, comprising 11 acres, and to carry on the business of brick and tile makers, quarrymen, &c. The subscribers are—J. Tilt, Bromsgrove, 150; B. H. Lauder, Bromsgrove, 110; W. Corbett, Bromsgrove, 110; H. Wheelock, Bromsgrove, 100; J. Lea, Bromsgrove, 60; H. S. Whitfield, Bromsgrove, 60; H. Barrett, Bromsgrove, 50; P. Levens, Bromsgrove, 50.

THE BURNHOPE LEAD MINING COMPANY (Limited).—Capital 10,000L, in shares of 1L. The searching for, winning, and working of lead ore and other minerals, in ground situated at Edmundbyers, county of Durham, the leasing and otherwise acquiring the orea and minerals, and generally to carry on all operations connected with a lead mining and smelting company. The subscribers (who take one share each) are—J. Leybourne, Shotley Bridge, mineowner; W. Featherstonhaugh, Blackhill, Rev.; J. Leybourne, Sunderland, cashier; L. Leybourne, Blackhill, clerk; J. F. Bell, Langley Park, corn merchant; W. Logan, Langley Park, M.E.; R. Murray, Blackhill, gentleman. The following make up the first board of directors—Messrs. S. and J. Leybourne, Featherstonhaugh, Bell, and Logan. The number must not be less than five or exceed seven. The qualification being fixed at 50 shares.

THE BARROW BRIDGE COTTON SPINNING COMPANY (Limited).—

The number must not be less than hive or exceed seven. The quantication being fixed at 50 shares.

The Barrow Bridge Cotton Spinning Company (Limited).—
Capital 80,000L, in shares of 10L. The general business of spinners and manufacturers of cotton, doublers, &c. The subscribers (who take one share each) are—J. Butterworth, Rochdale; W. H. Horsfall, Sale; C. W. Ireland, Sale; R. Lennox, Halliwell; F. McCormack, Bolton; J. Vanse, Halliwell; H. Haselden, Sharples.

THE INTERNATIONAL INDUSTRIAL AND IMPROVEMENTS COM-PANY (Limited).—Capital 600,000l., in shares of 10l. To acquire, buy, use, vend, and deal in patents, concessions, &c. The subscribers (who take one share each) are—A. M. Ullman, Paris; H. Sinnett, 3, Great Queen-street; J. Oppenheim, 216, Piccadilly; E. H. Wilson, 31, Lombard-street; A. T. Smith, Ilford; R. Attenborough, 3, Great

31, Lombard-street; A. T. Smith, Hiford; R. Attentoriough, 9, Managueen-street; J. B. Apack, Paris.

CAYARGNA'S PATENT HEATING APPARATUS AND SMOKELESS

FUEL COMPANY (Limited).—Capital, 20,000L, in shares of 5L. To
manufacture, sell, and deal in artificial fuel in connection with certain patents. The subscribers are—W. Butterworth, Manchester, 20;

J. Hope, Manchester, 10; J. Witty, Manchester, 10; P. Gregson,
Manchester, 1; W. Foote, Manchester, 1; J. Cavargna, Manchester,

1. C. R. Garding, Manchester, 1.

Manchester, 1; W. Foote, Manchester, 1; J. Cavargna, Manchester, 1; C. E. R. Gerdler, Manchester, 1.

THE MACDEBURGH TRAMWAYS COMPANY (Limited).—Capital 120,000%, in shares of 10%. To lay down, construct, equip, maintain, and work a system of tramways in said city or elsewhere. The subscribers (who take one share each) are—E. Greenway, Colesbill; J. Fell, Leamington; G. Greenway, Leamington; E. Neave, Dresden; E. Pritchard, Birmingham; B. Campbell, Warwick; E. H. Carter, Birmingham.

E. Pritchard, Birmingham; B. Campbell, Warwick; E. H. Carter, Birmingham.

The Windsor Investment Company (Limited).— Capital 20,000l, in shares of 10l. To acquire a property in South Wales, and to carry on the usual business of a land investment company. The subscribers are—R. W. A. Southern, Cardiff, 5; B. W. King, Cardiff, 5; S. Horn, Cardiff, 5; S. Fletcher, Cardiff, 5; D. Duncan, Cardiff, 10; J. T. Edwards, Cardiff, 2; H. A. Hughes, Maidstone, 1.

The British And Foreign Municipal Trust (Limited).—Capital 5000l., in shares of 5l. To make advances on various kinds of securities, and to carry on generally a financial business. The subscribers (who take one shars each) are—T. R. Doure, Shepherd's Bush; F. Allnutt, 28, Paternoster-row; A. V. Kyrke, Croydon; H. S. Hawkesworth, 70, Stoke Newington-road; G. M. Shallard, Greenwich; S. D. Shallard, Greenwich; C. E. Doyle, 12, Newgate-street.

JOHN FIECHTER, SONS, AND COMPANY (Limited).—Capital 100,000l., in shares of 5l. To purchase, take over, and carry on a business of millwrights, engineers, and iron and brass founders. established in Liverpool and Warrington. The subscribers (who take one share each) are—S. Jones, Warrington; J. T. Barker, Anfield; E. Fiechter, Liverpool; J. H. Wharton, Liverpool; H. Bartlett, Liverpool; E. Berry, Liverpool; J. H. Wharton, Liverpool.

The UTAH (Limited).—Capital 150,000l., in shares of 1l. To purchase, or otherwise acquire, settle, improve, colonise, and cultivate lands and hereditaments in the territory of Utah or elsewhere. The subscribers (who take one share each) are—F. P. W. Cockford, Hand-cross: W. J. Horn, Lupper Tooling: S. B. Hancek, 56, Warwick-road.

subscribers (who take one share each) are—F. P. W. Cockford, Hand-cross; W. J. Horn, Upper Tooting; S. B. Hancock, 56, Warwick-road; C. Hancock, 56, Warwick-road; M. E. Pemberton, 28, St. Swithin's-lane; E. D. Chester, Surbiton; C. X. Hobbs, 449, Strand.

THE CORTICINE FLOOR-COVERING COMPANY (Limited).—Capital

THE CORTICINE FLOOR-COVERING COMPANY (Limited).—Capital 150,000l., in shares of 10l. To acquire by purchase, and continue a floor-cloth manufacturing business, established in London and at Ponder's End. The subscribers (who take one share each) are—R. Scott, 112, Queen Victoria-street; H. D. Browne, 34, Avenue-road; W. J. Taylor, Putney; W. Game, 38, Threadneedk-street; G. S. Oldfield, Sevenoaks: J. Hind, Nottingham; W. H. Game, Esher.

THE DAYTON COAL AND IRON COMPANY (Limited).—Capital 250,000l., in shares of 100l. To acquire and undertake the whole or any part of the property, rights, and liabilities of a company bearing the same name (incorporated Feb. 24, 1883), and which is now in liquidation. The shareholders of the old company to be allotted the number of 100l. fully paid-up shares set opposite their respective names in a schedule, and these shall be accepted in full satisfaction of all claims as shareholders of the old company. To carry on all operations and business connected with a coal and iron company. The subscribers (who take one share each) are—G. Salt, 7, Albemarle-street, no occupation; T. Salt, Bradford, spinner; W. Donaldson, Glasgow, merchant; W. A. Donaldson, Glasgow, iron merchant; J. MacLellan, Glasgow, iron merchant; T. Mackinson, Post Office Chambers, iron merchant; A. McCleland, Glasgow, accountant; C. Stead, Bradford.

THE ILLUMINATING GLASS CEILINGS COMPANY (LIMITED).—Capital 100,000l., in shares of 11. To acquire, use, sell and deal in

THE ILLUMINATING GLASS CEILINGS COMPANY (LIMITED) Capital 100,000L, in shares of 1L. To acquire, use, sell and deal in paients for "improvements in the manufacture of ornamental glass, and in the construction of ceilings." The subscribers (who take one Richmond; W. H. Dresher, 80, Mortimer-street; S. R. Harbert, Catford; P. A. Ames, 1, Duke-street; W. O. Felt, 38, Loraine-road; B. Carter, 16, Great St. Thomas the Apostle. CASTLE-STREET PROPERTY COMPANY (Limited).—Capital 20,000l.

CASTLE-STREET PROPERTY COMPANY (Limited),—Capital 20,700. in shares of 104. To acquire land and house property in Liverpood and to let or otherwise deal with and manage the same. The subscribers are—E. Harvey, Liverpool, 500; D. Radcliffe, Liverpool, 250; J. Roberts, Liverpool, 125; G. E. Grayson, Liverpool, 126; J. J. Robinson, Liverpool, 125; G. E. Grayson, Liverpool, 150; T. Hanson, Liverpool, 250; W. Knox, Liverpool, 1.

THE BURY INVESTMENT AND PUBLIC TRUST COMPANY (Limited) THE BURY INVESTMENT AND PUBLIC TRUST COMPANY (Limited).

- Capital 20,0004, in shares of 12. The business of a property and public trust in all branches. The subscribers are—J. Blore, Bury, 5; W. H. Kay, Manchester, 1; J. Ramsden, Bury, 1; F. Wild, Bury. W. Bentley, Bury, 1; J. Mellor, Bury, 1; C. Lord, Bury, 1.

THE LONGLANDS TEMPERANCE HOTEL AND BOARDING HOUSE

THE LONGLANDS TEMPERANCE HOTEL AND BOARDING HOUSE COMPANY (Limited).—Capital 5000l., in shares of 5l. The business of temperance hotel and boarding-house proprietors at Swansea, South Wales. The subscribers are.—J. Donogue, Swansea, 60; J. Down, Swansea, 100; X. Ganz, Swansea, 20; S. C. Johnson, Swansea, 34; J. P. Martin, Swansea, 5; G. Hall, Swansea, 4; J. Williams, Neath, 4. THE LONDON CLUB COMPANY (Limited).—Capital 20,000l., in shares of 1l. The general business of club proprietors, &c. The subscribers (who take one share each) are.—C. T. Lake, 6 Durham-road; W. M. Holmes, 52, Alderney-street; A. A. Bray, Stcke Newington

H. Jay, Clapham; E. Palmer, Hammersmith; J. Williams, Peckham; D. G. Jones, 25, Warlock-road.

D. G. Jones, 25, Warlock-road.

THE COLONIAL PRINTING AND PUBLISHING COMPANY (Limited).

—Capital 6000!., in shares of 1!. The general business of printers, lithographers, newspaper proprietors, publishers, &c. The subscribers (who take one share each) are—A. G. Horton, 30, Fleet-street; G. M. Reed, 30, Fleet-street; L. A. Nathan, 9, New Broad-street; W. Sidman, Brixton; W. Saunders, Streatham; W. R. Dennis, Sutton; W. Warnley, 6, Snow Hill.

THE CROSS GATES, HALTON, AND SEACROFT GAS COMPANY (Linited).—Capital 10,000/., in shares of 10/. The acquisition of lands he erection thereon of gasworks for supplying said district, situated a Yorkshire, with gas. The subscribers are—T. W. Stears, Hull, 50 in Yorkshire, with gas. The subscribers are—T. W. Stears, Hull, 50 F. Moses, Hessle, 5; G. J. Lampen, Wakefield, 3; J. Bentley Wakefield, 3; T. Chippindale, Schotes, 3; J. W. Crosthwaite, Halton 3; J. Graveley, Halton 1.

#### THE MINING AND GEOLOGICAL FEATURES OF THE BLACK COUNTRY.

In his paper read before the joint meeting of the Chesterfield and Derbyshire Institute of Mining, Civil, and Mechanical Engineers, and the South Staffordshire and East Worcestershire Institute of Mining Engineers, Mr. Hener Johnson, Jun., of Dudley, said that it was well known that South Staffordshire was one of the oldest of it was well known that South Staffordshire was one of the oldest of the great mineral-producing districts of Great Britain. It was in the immediate neighbourhood of Dudley that Dud Dudley, in 1619, first demonstrated the practicability of smelting clay ironstone with coal in lieu of charcoal. The following extract from Plot's History of Staffordshire, published in 1686, served to show the state of the South Staffordshire coal field at that time. Speaking of the common coal then raised at Wednesbury, Dudley, and Sedgley, Dr. Plot said:

—"Of which sort there is so great plenty in all parts of the country (especially about the three above-mentioned places) that most commonly there are 12 or 14 collierys in work, and twice as many out of work within 10 miles round, some of which afford 2000 tuns of coal yearly, others 3000, 4000, or 5000 tuns. The upper or topmost beds above the ironstone lying sometimes 10, 11, or 12 yards thick.

— nor indeed could the country well subsist without such vast supplies, the wood being most of it spent upon the ironworks." In its virgin state the South Staffordshire coal field was remarkably rich both in coal, ironstone, and limestone, and as owing works." In its virgin state the South Staffordshire coal field was remarkably rich both in coal, ironstone, and limestone, and as owing to the geological structure of the country the principal seams of each cropped out in various places, the mineral riches of the district could not well escape attention. In point of concentration of wealth, no part of Great Britain had presented more striking characteristics than South Staffordshire, Within a comparatively short distance from the surface a great number of rich seams of coal and ironstone existed and in several instances the ironstone was acclosely associated. from the surface a great number of rich seams of coal and ironstone existed, and in several instances the ironstone was so closely associated with the coals that both were worked by one operation. The most valuable seam was the famous Thick or 10 yard coal, which represented a deposit of pure carbonaceous matter not found in a single stratum in any other coal field of Great Britain. That enormous bed of coal might be said to consist of numerous minor beds, in some cases with very little foreign matter intervening, but in the south end of the coal field much clayey deposit separated the layers of coal comprising the Thick coal. Notwithstanding, however, the extent of the minerals originally existing in that coal field, the requirements of the local iron manufacture and of the many other manufactures that had sprung up in the neighbourhood, together with the demand for domestic consumption, had led to a large continuous extraction of coal; and it was generally admitted that the older portion at least of the "Black Country" was nearly worked out and exhausted.

Under these circumstances it had become a matter of vital importance to South Staffordshire to ascertain what prospects there were of following the coal measures underneath the red rocks which surrounded the coal field. The credit for the first successful attempt to settle that important question was due to the Sandwell Park Colliers Company whose operations had been entirely carried out from the

to settle that important question was due to the Sandwell Park Colliery Company, whose operations had been entirely carried out from the commencement in 1870 until within a few months ago by his (Mr Johnson's) father and himself as pioneers and engineers. The posi-Johnson's) father and himself as pioneers and engineers. The position of the trial shaft was about 1½ mile east of the eastern boundary fault, or about 1 mile beyond the previous known boundary of the coal field. The section of the colliery was—Permian, 200 yards dary fault, or about 1 mile beyond the previous known boundary of the coal field. The section of the colliery was—Permian, 200 yards; upper coal measures, 100 yards; lower coal measures, 118 yards; Thick coal, 9 yards. Depth below sea level about 830 ft. The maximum quantity of water met with in sinking was about 750 gals, perminute, but now only about 40 gals. The 1501 shares of the company were sold for 5001 when the Brooch coal was struck, and for as much as 11351, when Thick coal wasstruck. After giving particulars as to the plant and the works constructed since the coal was won, the writer said that benefiting by the discovery of coal al Sandwell the Perry and the Hamstead sinkings were commenced about 2½ miles to the north-east, and considerably in the deep of Sandwell, the former being more than 2 miles, and the latter about 1½ mile beyond the eastern boundary fault, or parent coal field, and both sinkings being confined within the exposed area of permian, as at Sandwell. The Perry sinking was conducted by Messrs. S. and J. Bailey, mining engineers, of Perry Barr, and after sinking 130 yards, and boring to a total depth of 560 yards, was abandoned and dismantled, the proof being left to the Hamstead Colliery Company to make, which they ultimately succeeded in doing, after about five years' sinking, at a depth of 515 yards. The amount expended in the Perry trial sinking was about 40,0001. The failure to discover coal at the great depth bored to at Perry, and the inclination of the Thick coal as proved by the Hamstead workings, suggested the existence of a large downthrow fault between the two sinkings, and he believed it was the general opinion of those more intimately connected with the subject than himself that that was so. The Sandwell and Hamstead sinkings might be said to have proved coal about 1½ mile beyond the previously known coal field, and to have increased the area several square miles, and it might also be said that they had also, to a considerable extent, proved the continuity of the coal fi The extraction of so thick a seam at such great depths was quite a new feature in mining, at least in this country, and must, therefore, in the absence of any previous experience, form matter of the greatest consideration and caution in working. Next proceeding to describe the drive through the "Black Country," which would be taken on the following day by the members, he said that, starting from the Hamstead Colliery, the party would pass over the conglomerate beds and permian to the Sandwell Park Colliery, which was about 210 ft. relatively higher than Hamstead. Thence they would continue over the permian and flat ground to the eastern boundary fault, which was an upthrow west of 150 yards near to the town of Oldwhich was an upthrow west of 150 yards near to the town of Oldbury, the coal measures there being exposed to the surface, and the Thick coal only about 20 yards deep, so that in 3½ miles the coal was thrown down relatively nearly 700 yards. They would proceed along the slope of the Rowley Hills to the Hailstone Basaltic Quarry and Turner's Hill, 820 ft. above sea level, from which a splendid view of the South Staffordshire and East Worcester-shire coal field might be obtained. The coal field would now be in-cluded within a line drawn from Brereton, near Rugeley, to Wolverhampton, thence through Kingswinford to Stourbridge, and from that to the hills known as the Bromagrove Lickey, and thence by Harborne and Handsworth and Great Barr, through Aldridge back again to Brereton, and it might be said to measure about 26 miles in length and about 9 miles in width, and have a mean height of about 400 or 500 ft, above the sea.

The rocks that entered into the composition of the district were both igneous and aqueous. Of the latter there were in ascending order—1. Silurian, consisting of the Wenlock and Ludlow series.—2. Coal measures proper,—3. Permians.—4. New red sandstone.—5. Drift deposits. The former comprised masses of columnar basalt, its results of wards of wards. o. Little deposits. The former comprised masses of columnar basalt, inter-bedded traps, and decomposed intrusive igneous rocks of various kinds. After inspecting the basaltic quarry the party would proceed over the summit of the hills to Dudley, passing; on the way Earl of Dudley's Lye Cross Colliery and Messrs. Minton's Grace Mary Colliery. Igneous rocks were found in various parts of the coal field, but by far the most important mass formed the Rowley Hills, which measured about 2 miles long by 1 mile wide, and with the out-

crop of the Wenlock limestone at Dudley and Sedgley, formed a great anticlinal line which divided the South Staffordshire from a Rast Worcestershire portion of the coal field. Recent mining opentions had thrown considerable light upon the relation of the larg mass of Rowley basalt to the coal measures beneath. It had be clearly demonstrated that the basalt formed only a comparative thing capping over the coal measures, which lay in regular one beneath, and were for the most part unaltered by their close cominguity to the igneous rock, which appeared to have been forced a through a small opening or openings, and to have spread itself over what was at that period dry land, or the bottom of shallow son. The Thick coal was won at Mossrs, Minton's a depth of 275 yards, the sinking being nearly at the same mit of the hills, and what was as remarkable as the discorp of the coal was the fact that in the sinking no basalt was me with, although it was in situs highly columnar within 50 yards of the shaft. It was only just to say that that spirited enterprise made to the sound geological knowledge of the late Mr. Samuel Minton The Earl of Dudley was raising large quantities of Thick coal from the Earl of Dudley was raising large quantities of Thick coal from the Earl of Dudley was raising large quantities of Thick coal from the Earl of Dudley was raising large quantities of Thick coal from the Earl of Dudley was raising large quantities of Thick coal from the Earl of Dudley was raising large quantities of Thick coal from the Earl of Dudley was raising large quantities of Thick coal from the Earl of Dudley was raising large quantities of Thick coal from the Earl of Dudley was raising large quantities and that sinking we relatively about 1000 ft. above the Thick coal at Sandwell, and about 1000 ft. above the Thick coal at Sandwell, and about 1000 ft. above the Thick coal at Sandwell, and about 1000 ft. above the Thick coal at Sandwell, and about 1000 ft. above the Thick coal at Hamstead. A canal tame was driven through the crop of the Wenlock limestone at Dudley and Sedgley, formed a great anticlinal line which divided the South Staffordshire to

was driven through the Rowley Hills some years ago 2½ miles glength, at a cost of about 200,000ℓ, and no basalt was passed through. Fifty years ago it was generally believed that no coal would be found under those basaltic hills, and now it was difficult to say when it did not exist. No large pipe or leader of basalt coming from below had yet been discovered in any of the workings. On arriving a Dudley the party would visit the home of the local Mining Institut, as also the Dudley and Midland Geological Society's Museum, which were under the same roof. Outcrops of the Thick and other coal occurred all round the town of Dudley, the foundation of some of the principal buildings in the heart of the town being in the calteelf. After inspecting Dudley Castle the party would drive through the grounds and along the outcrop of the Wenlock limestone, forming part of the Castle Hill, via Tipton, to the Thick coal open writings at the Foxyards, belonging to the Earl of Dudley. There we to be seen the most remarkable coal deposit in the kingdom—a sea from 35 to 45 ft. thick of good coal, covered only with a few feet of underlying, and, like the Thic coal, of more than the average thickness and quality. The Tikic coal, of more than the average thickness and quality. The Tikic coal was within a few feet of the surface soil, while at Sandwell Colliery it was 418 yards, and at Hamstead 615 yards depton the surface. The falls of coal in that work had sometime amounted to the enormous quantity of from 5000 to 6000 tous at our exercise occurrences are to be seen the worker of the properties of the part of the coarmous quantity of from 5000 to 6000 tous at our exercise occurrences. from the surface. The falls of coal in that work had sometime amounted to the enormous quantity of from 5000 to 6000 tous 2000 operation, occupying weeks to load up. The whole seam was entracted at one operation, scarcely a ton being left behind. The was a peculiarity attaching to that extraordinary thickness of one at the outcrop—its density or specific gravity was much less than a greater depths, the theory advanced for that being that it could not greater depths, the theory advanced for that being that it could not great here covered with any considerable thickness of strata and greater depths, the theory advanced for that being that it could not have been covered with any considerable thickness of strata, and therefore, had not been subjected to any great superincumbent passure. The appearance of that extraordinary deposit of coal attesurface was due to the upheaval of the Wenlock limestone. From the Foxyards openwork the party would continue along the line of outcrop of the Wenlock limestone of the Wren's Nest, and these along the western outcrop to the limestone caverns at the northest of the hill. Between Dudley and Wolverhampton they had a serial of eminences that were for the most part anticlinals of upper sliprian strata. Dudley Castle, Wren's Nest, and Sedgley Hills were composed of the Wenlock limestones and shales. The ridge of hip ground running from Dudley to Sedgley, of which the most cospicuous points were Dudley Castle Hill (730 ft.), the Wren's Nest (730 ft.), and Sedgley Beacon (760 ft.) above the sea, might be aid to form part of the central watershed of England. The southern per tion fell into the Bristol Channel, while the northern portion fell into the Bristol Channel, while the northern portion fell into the German Ocean. Passing from the outcropping Wenlock limestones. tion fell into the Bristol Channel, while the northern portion fell into the German Ocean. Passing from the outcropping Wenlock linstone on to the exposed coal measures, and again crossing the seral outcropping seams of coal, the party would continue along the high ground to Upper Gornal (where the Ludlow limestones and shall were exposed) past Sedgley Beacon, and crossing the western bouldary fault, and again over the permians which bordered that side the coal field to Wolverhampton. There the party would visit the archeological and geological sections of the Exhibition now being held in that town, containing a very large and interesting collection of local fossils and objects of interest (both ancient and moten) connected with mining in the district. nnected with mining in the district.

### THE MINERAL VEINS OF THE LAKE DISTRICT .- No. III.

The only difficulty now to be overcome is as to how the sulphiles were produced? Were they condensed from sublimed vapous, if precipitated from aqueous solutions, as it is quite clear from its nature of the veinstones that they could not have been injected igneous fluids? When sulphides of Iron, zinc, lead, and copperst igneous fluids? When sulphides of Iron, zinc, lead, and copper at heated in the presence of air, oxygen, or steam they are decomposed, therefore, if pyrite, galena, chalcopyrite, and blende resulted from the condensation of vapours, it will be necessary to assume that the exact combining proportions of the sulphur and metals were president of the condensation would not be a simple condensation sulphides that had just been vapourised, but the production of a definite combination from an indefinite mixture of elementary sistences that in all probability had previously existed quite apart. It seems, therefore, more likely that the ores were precipitated from eems, therefore, more likely that the ores were precipitated fron queous solutions in the way indicated below for blende, although the reaction necessary for the production of each ore might be

Bolution.

Zn H<sub>2</sub> SO<sub>5</sub>

K<sub>5</sub> S or Na<sub>5</sub> S

Zn SH<sub>2</sub> O

At ordinary temperatures the resulting zinc sulphide would be hydrated as shown above, but it is probable that at such hight temperatures as accompanied these reactions under pressure the properties would be analydrous as is known, for example, to be the case with hematite. K<sub>5</sub> S or Na<sub>5</sub> S would result from the action of sulphuric acid on the alkalies in the country rock. It is only new the country rock. sary for one metallic solution to have been present in the rela-once, because it has been seen that the different ores were out deposited together but in succession. This, also, partly explains my it is that some minerals are more abundant in veins having certifications than in those with other courses. Take chalcopyrite for example. This ore is most frequently and most abundantly found it weins having an easterly and westerly bearing. It also appears this it was the earliest of the metallic minerals to be introduced in veins, and this may be the reason that it is so much more abundant in east and west veins than in those which may be roughly spoked as north and south veins—for the east and west veins seem to have existed first. This may not be so in every case, but it is in a large proportion of them, and notably so at Goldscope, where the east west copper vein has been shifted by the north and south lead well. Facts of similar import may be observed in adjoining areas, such the Whitehaven hematite district. There, owing to great lithologist variations in the strata, the existence of faults and their relationages are easily ascertained, and it is a well-established fact that the east and west faults are older than those which are nearly northest deposited together but in succession. This, also, partly explains which and west faults are older than those which are nearly north se

The banded structure so common in the veins of other districts not met with here, but the phenomena exhibited by such veins be quite easily explained with the help of the foregoing consistent without arrangement of the state be quite easily explained with the help of the foregoing consentions without assuming that they were preceded by fissures of the banded appearance of their contents is due to the repeated opeing of such fissures. Suppose a narrow vein of quartz had bear formed in the way heroin suggested, and that the pores of cells in a had been filled by some metallic mineral (say) chalcopyrite. September (authority of the first part of this prosent were repeated, and that the acid solution acted on both walls of the vein already in existence. The consequence of that operation well be the formation of two additional ribs of quartz veinstone, one of each side of that containing the chalcopyrite. The pores in these

difficu practi deep. numer within of quarte estima or 380 oz.,

slate t

sterlin report

vorki of fign

of 59,

cubic

453,71

Stuar was to at the

would as miner

mana over-l of the

nothi

the g The protection No able

n the

atisfa waded

gratifi

" The

1884

formed the ire from the ire from the ire from the ire from the large of the large o

coal from ough about inking was and about nal tunnel

rriving at Institute,

ther coals
some of
the coal

e through ne, form-en work. There was

peculiar ne Thick he Thick

ould not sta, and, ent pre-al at the

Prome line of orth end a series er silu-lls were of high

ern por-ell into

several he high shales

later formed ribs might eventually be filled with galena, and so o later formed ribs might eventually be filled with galena, and so repeating the process two deposits of blende might be got outside galens. Thus it becomes possible to account for the banded galens. The without the assumption of fissures, and thus is necture of veins without the assumption of fissures, and thus is inclured or great difficulty there would be under such circumstances keeping the walls apart whilst the vein materials were deposited, keeping the walls apart whilst the vein materials were deposited to quarts ribs formed after the first one might only be single—that merely on one side of the already existing vein, so that then the ands would not appear in pairs but singly as they are often known and

merely and not appear in pairs but singly as they are often known and would not appear in pairs but singly as they are often known and appearation having now been attempted of the most important an explanation having now been attempted of the most important but presented by veins with veinstones. All the arguments that irrected to those veins without veinstones. All the arguments that irrected to those veins without veinstones. All the arguments that irrected to those veins with veinstones are equally forcible now. If so it is called the incompetence of the old fissure idea to explain the arguments with veinstones are equally forcible now. If so it is called the veins with veinstones are equally forcible now. If so it is called the original rock like the quartz of the veinstones. As has been on the original rock like the quartz of the veinstones. As has been for the original rock being first taken by dolomite, which was subsected the original rock being first taken by dolomite, which was subsected the original rock being first taken by dolomite, which was subsected to remove and replaced, for example, by hematite. Veins of sently removed and replaced, for example, by hematite. Veins of sently removed and replaced, for example, by hematite. Veins of sently removed and replaced, for example, by hematite. Veins of sently removed and replaced, for example, by hematite. Veins of sently removed and replaced, for example, by hematite. Veins of sently removed and replaced in some way not unlike the following:—Heated ably originated in some way not unlike the following:—Heated ably originated in some way not unlike the following:—Heated all the features of soda, rising along the more open sater containing carbonate of soda, rising along the more open sater containing carbonate of soda, rising along the more open sater containing carbonate of soda, rising along the more open sater containing carbonate of soda, rising along the more open sater containing carbonate of soda, rising along the more open sater containing carbo

and form a precipitate of carbonate of time and magnesia in the mace previously occupied by the rock dissolved from the sides of the joints.

From the manner in which the dolomite of these veins is traversed by strings of hematite it shows clearly that the former mineral existed its. If, therefore, it be assumed that all hematite veins were once veins of dolomite their replacement may have been effected in some such way as the following:—It is well known that perchloride of iron is a common volcanic product, and if it be assumed that during ome period of volcanic activity a solution of this salt was forced up some of the fractures or more open joints in the rocks, and so brought into contact with the dolomite veins, a chemical reaction would incontact with the dolomite veins, a chemical reaction would be earled off in solution, and hematite would be thrown down in its place, so that the walls would never be left unsupported, and, therefore, would not have any tendency to fall away. The age of the hematite veins is probably early permian. This is shown by two facts. First, rounded and smoothed pieces of hematite have been met with in the breccia which terminates the lower permian in West Camberland. Secondly, a bed of hematite occurs in the upper coal measures at Millyeat, about 5 miles from Whitehaven.

Finally, the principal conclusions arrived at in the argumentative part of this investigation may be thus summarised:—1. Veins are not filled fisares.—2. The variations in breadth are not due to the solubility of the rock.—3. Veinstone is part of the rock which eriginally existed where the veins now are, and is a result of measurephism.—4. The metallic minerals, hematite excepted, were deposited in cavities of the veinstone from chemical solutions.—

6. Hematite veins are substitutional deposits.

Hematite veins are substitutional deposits.

### HAS THE TRANSVAAL BUBBLE BURST?

HAS THE TRANSVAAL BUBBLE BURST?

Sig,—This will be the question naturally arising after reading the voluminous or the wordy and windy report of Prof. Foster-Heddle, on the Lisbon-Berlyn property; it is evidently a case of a mountain in labour bringing forth a mouse. Where the hopeful view or the satisfactory position comes in it is difficult to make out. I have waded through the mass of words with difficulty, but fail to grasp at what the professor's real opinions are, or where the shareholders who have subscribed the money for the enterprise will find gratification. At the present it looks very like a second edition of "The Emma" bound in "calf"-like confidence of deluded shareholders. If long-winded reports from professors and amateur mining authorities, or the glamour of an oily-tongued promoter or dammy chairman of meetings would but pay dividends in cash instead of promises what glorious times some of the gold mining companies established in London would get. The professor says in one part of his report—"The lower vein, 3 ft. thick, is chiefly quartz, with veinstuff poor in appearance. This is the locality mentioned by Hamilton as showing the vein of great width; he seems to have in his measurement included the rock which lies intermediate to the two veins above described, as that rock has a width of about 7 ft., and apparently may yield some gold."

I should think there was something very hard to believe, but not difficult to understand, "which lies" intermediate about here if it be the locality as reported on by Mr. Stuart as follows:—Page 9 of his report—"These 11 veins, with their slate interlaminations, constitute ractically one vein 80 ft. wide, I mile long, and on an average 325 ft. deep. This vein has been proved by workings to a large extent at numerous points through its entire length. I estimate there are within the area of this vein 8,750,000 tons of slate, and 656,250 tons of quartz. After numerous and careful tests I am satisfied that the quart when milled will yield 10 ozs. (say 38L) to the

or 3800%. to the ton. As to the slate, the softer portion should yield  $\frac{1}{2}$  or  $\frac{1}{2}$ , or  $\frac{1}{2}$ , per ton, and the harder portion  $\frac{1}{2}$  oz, or  $\frac{1}{2}$ . to the ton. I estimate that the average value of the whole vein matter, ore, and slate together, being worked together, should be 13 dwts. 22 9-16ths. grains= $\frac{2}{2}$ . 14s. to the ton. The aggregate value of the whole material (ore and slate) at the above valuation would be 25,396,875%. sterling." There is a wide gap for a baron to fill up with plausible oratory, between the doubt and uncertainty of Prof. Foster-Heddle's report as to whether there is any quartz or slate that will pay for working, and the charming exactness of calculations and magnitude of figures by Mr. Stuart, or the still wider estimate of Dr. Atoherley, who could "not allow so astonishingly low a valuation as Mr. Stuart's to pass unchallenged," and who summed up a total estimate of value of  $\frac{59}{23}$ 36,000%. In the Journal of Sept. 6 was a report from Mr. D. Crittenden,

in the Journal of Sept. 6 was a report from Mr. D. Crittenden, of Lisbon-Berlyn, which is evidently written by a practical and sensible man who knows what he is writing about, very different in its tone from the trash and falsehoods with which the public have been galled by others. Mr. Crittenden estimates about 500 acres of alluvial ground that will average about 15 ft. in depth, with an Arrange page of 62 to 12 to 12 to 12 to 13 to 14 to 14 to 15 to 16 to alluvial ground that will average about 15 ft. in depth, with an average value of 6d. to 9d. per cubic yard (say) about 12,100,000 cubic yards, "showing what the future yield will be of alluvial already ascertained to be on the property as worth from 302,500l. to 453,750l." There is a wide difference of opinion here again from Mr. Steart's report, of what appears to be the same property; his estimate was that the alluvial would range from 1s. to 7s. per cubic yard, and at the minimum value of 1s. by washing 40,000 cubic yards per day would give a net profit of 1400l. a day, or 420,000l. for the year, or as much profit in one year, as is intimated by an experienced miner to be the value of the entire yield of the alluvial. When the expenses of working are deducted, and the costs of ornamental management, the dividends on 500,000l. capital will not be likely to over-burden the shareholders with their weight. As nearly 120,000l, of the subscribing shareholders money has been muddled away, and nothing yet to show but "words, words, words," another stroke of financial policy is to be enacted—more money must be found to raise the gold laying on the surface, how heavy or light that gold must be. The public or the deladed shareholders are to be tickled by the promoters' plausibility to shell out in the game they do not understand. Now, as the shareholders have been evidently deceived by unreliable statements in the prospectus, and the ridiculous reports made by enthulsatic agrants.

able statements in the prospectus, and the ridiculous reports made by enthusiastic amateurs and so-called mining engineers, which were roughed for by the Chairman and directors, let them sell off their paid up above mith which the

paid up shares with which they so loaded the company, and find the

capital themselves to fulfil the wild promises they made. All huge aerial structures designed and built by windbags, upon a foundation of falsehoods and fraudulent intentions, are bound to come to grief

of falsehoods and fraudulent intentions, are bound to come to grief when mined into by honesty, truth, and experience.

Some men only use gold mining as a means to deceive other people as well as themselves, but the deception is bound to come out when the actual operations of getting, or attempting to get, gold begins. Men may lie, but the yield of gold does not. There is a solid substratum of truth when the crushing batteries, sluice-boxes, puddling machines, &c., are cleaned up that frivolous excuses and meaningless reports cannot alter. It is time that some of the humbugs who put themselves forward as authorities on gold mining, and who by force of impudence and assurance get fools enough to supply them with capital to squander in mining, were exposed, and their schemes and dodges brought to light.

GOLD MINER.

#### FOREIGN MINES.

BARLANCANNES OOPPER—Assoch Gardani, Sept. 3: The sinking of the engine-shath has gone on attainate origin and aimost uninterruptedly throughout of the windsome by a shot in the shotsom of the state; fortunately we were able to the windsome by a shot in the shotsom of the state; fortunately we were able to the windsome by a shot in the shotsom of the state; fortunately we were able to the windsome of the state of the s

Harewood tunnel has been driven 5 ft. We went through one leader 4 in. wide of good-looking quarts. This indicates we are approaching the reef. I am pushing this on as fast as possible.

EBERHARDT.—Frank Drake, Aug. 16: Drift No. 2 from 6000 ft. West: Advanced 8 ft.; total, 763 ft. The rock is not so hard as last reported; more of it, however, is ore, looking well enough to be good, as it carries silver. It is low grade, but I am hoping it may open into something better.—Drift No. 2 to the right, from Drift No. 2: Advanced 2 ft.; total, 61 ft. No change.—Biss No. 5: Advanced 8 ft.; total, 29 ft. It shows some quarts and low-grade ore. Our drivings for the past week, as per the distances above given, has been done by hand work, otherwise our advance would have been greater.—Compressor: In the first of part of last month one of our air cylinders required a new piston-head. This week the piston-head to the other air cylinder sequence and explined prebored. All is now nearly completed, so that the air drills will be running again in a day or two; bidding fair for good progress, and better results.

—Aug. 2: Machinery and all now running well.

KENT COUNTY GOLD.—The July returns show a production of 102% tons of ore, of an average value of 316:19 per ton, which may be considered very satisfactory, a good improvement being noticeable in the milling ore. The driving of the 600 ft. level west was resumed Aug. 4, arrangements having been made to lodge all waste in the stopes, and thus avoid holsting charges. Good progress is being made, 20 ft. having been driven in 12 days, and the vein is letting out a good deal of water, which is a good feature. The 500 drift, west of shaft, was also re-started at the same time, and 32 ft. were driven up to Aug. 16. There is 1 ft. of pay ore, and the cenuit of the test lot sent to the mill was fully 10 dwts. of gold per ton; and, since this was made, the vein has improved in appearance. If these results are maintained this level, which is now 50 ft. from shaft, will rapidly open out p

available for milling the ore from this mine, when that may be found desirable. The facility which this Fall river will give is a consideration of great importance in connection with the beneficiation of the low grade mill material, of which very large quantities exist in the upper workings, ready for extraction.

MYSOGE GOLD.—B. D. Flummer, Aug. 15: Stamping: I informed you last mail that we should clean up the gold on Tuesday as Wednesday. The result is highly astisfactory. We up the gold on Tuesday as Wednesday. The result is highly astisfactory. We stamped 95 tons of ore and recovered 96 ozs, 9 dwts. 6 grs. of bar gold, or over 1 oz, per ton of rock treated. Forty tons of this ore was broken from the side left standing by the old men, 45 to 50 ft. below the 173; this is the deepest point in the mine, the average assay value of this was about 2 ozs. 8 dwts. per ton. Fifty-five tons were taken from the old accumulations of stuff at surface, the average assay value was 7 dwts. 13½ grs. per ton. The results approximate as follows:—55 tons of 7 dwts., 19 ozs. 5 dwts.; 40 tons broken in Taylor's shaft, 17 ozs. 4 dwts. 6 grs.—96 ozs. 9 dwts. 6 grs. This gives to the ore broken in the bottom of the mine (and it is from a part of the lode left by the old workmen) 1 oz. 19 dwts. per ton nearly. I have forwarded this gold to our agents in Madras, with a request that they dispatch it to you as quickly as they can. The stamps continue to work satisfactorily. We are now stamping some of the stuff that has been stored at surface; this is not rich, but by the middle of our stamping month I hope to get 40 or 50 tons from the bottom of the mine, and so get about equal results as last month.—Mining Operations: Everything goes on the same as reported to you last week. The lode in Taylor's shaft, 50 ft. below the 173, looks as good as ever, and it now appears from certain indications that we are nearing the bottom of the old men's works. We shall recover a good many tons of ore from this place as soon as we reach the bottom, as

We shall successful that we have nearing one octoom of the old men's were reach the bottom, as a wide piece of lode was left by the former workers.

NERBUDDA COAL AND IRON.—Coal Raisings for July (monsoon month): Output, 1697 tons 3 cwts. 2 gr.; 16 lins, 126 sets, 1112 tons 6 cwts. 2 gr.; 16 lins, 126 cwts. 112 tons 6 cwts. 2 gr.; 16 lins, 126 cwts. 112 cwts. 126 cwts. 2 gr.; 16 lins, 126 cwts. 112 cwts. 126 cwts. 2 gr.; 16 lins, 126 cwts. 112 cwts. 126 cwts. 2 gr.; 16 lins, 126 cwts. 112 cwts. 126 cwts. 2 gr.; 16 lins, 126 cwts. 112 cwts. 126 cwts.

Telegram (received Sept. 9): 15 tons ore shipped, and 15 tons smelted, pro-ucing to company \$149.

SANTA BARBARA.—A telegram from Rio de Janeiro (Sept. 9) states that the roduce for August was 3050 cits. of gold, worth at 8s. 6d. per cit., 1298/. 5s. SPITZKOP (LYDENBURG) GOLD.—Manager, Sept. 12 (telegram): Have truck rich rotten reef near Silos.

ST. JOHN DEL REY.—Telegram from Morro Velho, dated Rio de Janeiro, iept. 9: Produce for the month of August (not distinctly indicated, most pro-ably) 18,500 oits., value 71691.; yield 3°5 oits. per ton. Mineral stamped at Julaba 1450 tons; yield 1°5 oits. per ton.

Sr. JOHN JEL KEY.—Telegram from Morro Velho, dated Rio de Janeiro, sept. 9: Produce for the month of August (not distinctly indicated, most probably) 18,500 ofts., value 7189f.: yield 3:5 oits. per ton. Mineral stamped at Ouisha 1850 tons; yield 1:5 oits. per ton. Mineral stamped at Ouisha 1850 tons; yield 1:5 oits. per ton. Mineral stamped at Ouisha 1850 tons; yield 1:5 oits. per ton. UNITED MEXICAN.—Mr. Hay, Guanaxuato, Aug. 25: Mine of El Diamante: In frente No. 1 of San Antamio we have driven on Aug. 16, 14:45 total metres. The strip is reduced to a width of 30 outside the ore has given out, and, consequently, we abandoned this working last Friday. Having resumed working in the winze of San Antamio west the ore has given out, and, consequently, we san antamio, at the point where we turned off to make the communication with Santa Rosa, the ore continues downwards, and is improving a little. The lode is 1:20 metre wide, of which 50 centimetres are in ore of a fair class. We sold in public sale 9 eargas for \$75, and 2 eargas of a better class for \$22. We have a possible of the soft of the adit in the Diamante called San Pablo, but hitherto we have not found anything. We sold last Thursday 17 ceargas of poor ore for \$67, making the total sold in public sale 3? cargas, which fetched \$302.—Mine of San Cayetano de la Ovejera: In the contracielo of pozo in No. 4 of San Juan the winze has holed in the gallery of San Juan andit. In the east side of this contracielo we have opened an end called, frente No. 7 of San Juan, east on the lode, 75 centimetres broad, all in good ore. Last Thursday we sold 6 organs for \$600. In pozo No. 8 of San Juan the lode is now only 80 centimetres broad, but the ore is of good class. In last public sale we sold 2½ cargas for \$149. In frente No. 11 of San Andres west the lode is exting broader, measuring at prevent of the second produced by the second p

VICTORIA (LONDON).—July 25: Total quartz crushed for the month ending July 16 1899 tons. Total gold obtained 323 ozs. 14 dwts. Average per ton 4 dwts. 145 gr. Aliuvial 1 dwt. 8 grs. Receipts 7851, 12s. 8d. Four weeks' mine costs 1264, 16s. 6d. Loss 479, 3s. 10d.

SE

OF

D

 $_{
m L0}$ 

# DYNAMITE (BLEOTRIC) EXPLODERS

### ELECTRIC MINE BELLS.

"The Telegraph Bells and Indicators you fitted for us in 1871 are still going admirably. It is, indeed, the soundest work we have yet seen, and the triffing cost of maintenance leaves no doubt that for all Mining and Commercial purposes the Electric system holds a decided advantage over all others for efficiency and durability."

LARGE BELL, PUSH, 50 YARDS INSULATED WIRE, and BATTERY complete on receipt of 25s. Suitable for easily communicating between distances.

communicating between distances.

Architects, Builders, Mining Engineers, Gas Fitters, and others desirous of using Electric Bells can be supplied with all the necessary stores and instructions for fitting. Estimates given for supplying and fitting Electric Bells, Lightning Conductors, Fire Telegraphs, Speaking Tubes, &c., on application. Vulcanised Indiarubber and Canvas Hose, Special Tubing for Acids, Gas, and Chemicals, Indiarubber Mats, Valves, Washers, Sheet, Rings, &c. Gutta Percha and Ebonite goods. Signals for Shafts, &c.

The Trade and Shippers supplied. Catalogue on application. PATENT ELECTRIC GAS LIGHTER, 21s., carriage paid.

Our new PATENT ELECTRIC GAS LIGHTER, having no battery, is practically inexhaustible.

tery, is practically inexhaustible.

ELECTRIC LAMPS for TABLE or OFFICE use

FRANCIS AND CO., EAGLE TELEGRAPH WORKS, HATTON GARDEN, E.C.

MINING TELEGRAPHS ERECTED.

### W. F. STANLEY

MATHEMATICAL INSTRUMENT MANUFACTURER TO H.M. GOVERNMENT, COUNCIL OF INDIA, SCIENCE AND ART DEPARTMENT, ADMIRALTY, &c.

MATHEMATICAL, DRAWING and SURVEYING INSTRUMENTS of every escription, of the highest quality and finish, at the most moderate prices.

Price List post free.

ENGINE DIVIDER TO THE TRADE. ADDRESS-GREAT TURNSTILE, HOLBORN, LONDON, W.C.

### WM. BREDEMEYER.

MINING, CONSULTING, AND CIVIL ENGINEER, ROOM No. 11, HOOPER ELDRIDGE'S BUILDING, MAIN STREET, SALT LAKE CITY, UTAH,

United States Mineral Surveyor for Utah and Idaho, Notary Public, Goological Examinations, Reports on Mining Properties; Surveys Mines, Bailroads, and Oanais, and Superintends the Workings of the same. Prepares Estimates and Plans for Opening and Working Mines. Expert on Mining Questions before the Courts. Address, P. O. Box, 1157, Salt Lake City, Utah.

JOHN ROBERTSON, F.S.A., MINING AND CONSULTING ENGINEER, LAS VEGAS, NEW MEXICO.

Mines and Mining Glaims carefully examined, Assays made of their Ores, and reliable Reports furnished.

Mining Freperties bought and sold on commission. Has special facilities for aspecting properties in Mexico.

References by permission:—L. P. BROWNE, Esq., Las Vegas, New Mexico; Don F. A. MANZAYARES, Las Vegas, New Mexice; His Excellency H. M. HOYT, Ex-Governor of Pennsylvanis, Harrisburg, Pa.; H. S. PIERCE, Esq., Banker, Beranton, Pa.; Hon. John Handley, President Judge 45th Judicial District, Scranton, Pa.; Hon. John Handley, President Judge 45th Judicial District, Scranton, Pa.; N. H. SHAPER, Esq., Cashier Third National Bank, Scranton, Pa.; E. B.

BTURGES, Esq., Attorney-al-Law, Scranton, Pa.; E. W. WESTON, Esq., General Agent Delsaware and Hudson Canal Company, Providence, Pa.; Hon. Sir John F. CLAREF, Baronet, Tillippronie, Aberdeensbire, Sostland; R. L., CHANCE, Esq., Birmingham, England; Joseph Konkerson, Esq., 17, Tokenhouse-yard, London.

THOMAS CORNISH, CONSULTING MINING ENGINEER.

Mines Inspected and Reported on. Advice on Mining Management and Investment.

and Investment.

Twenty-five years' practical experience in Australia.

Author of "Gold Mining: its Results and its Requirements"—"Our Gold Supply: its Effects on Finance, Trade, Commerce, and Industries"—"A Trip to Colorado," &c.

Address, care of Mining Journal Office, 25, Fleet-street, London, E.C.

A LEXANDER SMITH, M. Inst. C. E., CONSULTING A ENGINEER and VALUER of IRONWORKS,
MINING, RAILWAY, ENGINEERING, and other PROPERTY,
PLANT, and MACHINERY,
PRIORY STREET, DUDLEY

4, BURLINGTON CHANBERS, NEW STREET, BIRMINGHAM.

Mr. SMITH has been retained for nearly 20 years by some of the most prominent firms, and has conducted many of the largest valuations that have taken place in the kingdom. Valuations for Stock Taking or any other purpose upon very responsible terms.

A USTRALASIAN GOLD, TIN, COPPER, COAL, ANTIMONY,

A and ther MINES REPORTED ON for public companies or private shareholders by WILLIAM NICHOLAS, F.G.S.,
Lecturer on Mining, University, Melbourne, Consulting Mining Engineer, Exchange, Melbourne, Victoria, Australia.

WILLIAM BLMORE (LIMITED).

OFFERS WANTED for TWO, FOUR, or SIX DEBENTURES of £50 each. For prospectus of the company, see Mining Journal of May 26, 1863. No reasonable offer will be refused. Money wanted.

Address, "Dynamo," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

LOCOMOTIVES MADE AND REPAIRED.
Special shels for overhauling and storing if required when Speci completed. ESTIMATES GIVEN FREE OF CHARGE.

W. G. BAGNALL, CASTLE ENGINE WORKS, STAFFORD. HERBERTON (WILD RIVER) TIN LODES, NORTH
QUEENSLAND.

Every information relative to the progress of iede-tin mining in the Wild
River district (termed by geologists "The Cornwall of Australia") can be obwall o

tained by communicating with the undersigned. CHARLES JENKIN. "Herberton Advertiser 'Office Herberton, September, 1882. THE CANADA PACIFIC IBON AND STEEL BAIL

The Subscriber is desirous of opening communication with some party in England for the purpose of organising the above company.

One thousand acres of red hematite ore not far from the line of the C.P.R.

Address, Hubert C. Jones, Solicitor, Brockville, Ontario, Canada.

JUST PUBLISHED, PRICE 18.; BY POST, 18. 1D.

GEOLOGICAL MAP OF CORNWALL:

By BRENTON SYMONS, C.E., F.C.S.

A handsome SKETCH MAP, printed in FIVE COLOUES, and showing the Geological Formation, the Direction of the Lodes, and other useful details.

Will be forwarded on receipt of remittance.

MINING JOURNAL Office, 28, Fleet-street, E.C.

THE MINING RECORD, Only \$5:00 a year.

61, BROADWAY, NEW YORK.

the ONLY PAPER in the United States that gives FULL LATEST ACCOUNT from all the GREAT GOLD, SILVER, IRON, and COAL MINES of AMERICA.

ORDERS EXECUTED FOR MINING STOCKS. Information free ALEX. HOST. OHISOLM, Proprietor.

London Office—H. CARTER, Manager, 36, King William-street, London.

### QUICKSILVER-WAVE AMALGAMATOR COMPANY, LIMITED.

(MOON'S PATENT.)
FOR EXTRACTING GOLD AND SILVER FROM THEIR ORES.

Private individuals or companies having ores or auriferous taffings are invited to send samples, in bulk, to be tested.

The company undertake that the results obtained by them will be at least equalled in regular working. A machine, 9 feet by 2½ feet, can be attached to the batteries or stamp mills, and be at work within a few hours after its delivery at the mine, and will treat 10 tons per 24 hours.

a few hou 24 hours.

The company has published a new Pamphlet, with sketch of Amalgamator, and full particulars, and may probably soon offer a limited number of shares of £10 each.

Copies of Pamphlet and of Prospectus to be had on application at the company's offices.

27, THROGMORTON STREET, BANK, E.O. WORKS-17, WHARF ROAD, CITY ROAD.

### LE MOUVEMENT INDUSTRIEL BELGE.

EVUE TECHNIQUE, COMMERCIALE, ET FINANCIERE, sous la direction de Me, l'Ingénieur P, DESQUIN, Paraltra le \* Juillet, 1884, et suocessivement le \* Vendredi de s'haque semaine. Il continenta des articles d'actualité sur l'agriculture, la navigation, les mines, la construction, les machines, les chemies, les canaux, les travaux publies, le dreit leductriel et commercial, les inventions, et les perfectionements, et principalement sur l'Exposition Internationale d'Anvers, dont il publiera les plans, les dessins, et documents de tous genre.

documents de tous genre.

TEXTE ILLUSTRE DE BELLES GRAVURES.

Abonnements annuels:—Belgique, 25 francs; pays volsins, 30 francs.

S'adresser à Mr. NICOLAS FASTRE.

Ingénieur-Administr

Rue des Croisades 32. à Bruxelles.

Ingénieur-Administrateur.

ROYAL COLLEGE OF SCIENCE FOR IRELAND.
SCIENTIFIC AND TECHNICAL EDUCATION.

#### SESSION 1884-85.

This College supplies a complete Course of Instruction in Science as applied to the Industrial Arts, especially those which may be classed broadly under the heads of CHEMICAL MANUFACTURES, MINING, and ENGINEERING. A Diploma of Associate of the College is granted at the end of the Three Years Course.

There are Four Royal Scholarahips, tendte for two years, each of the value of 250 yearly, with free education, including Laboratory Instruction. Two become vacant each year. They are given to Students who have been a year in the College.

Jollege.

The Fees are £2 for each Course, or £10 for all the Courses of each year, with he exception of Laboratory Practice.

CHEMISTRY (THEORETICAL AND PRACTICAL), METALLURGY, &c.—Professor HARTLEY, F.R.S., F.C.S., F.R.S.E., MATHEMATICS, MECHANICS, AND MECHANISM.—Professor HENNESSY, F.R.S., W.R.I.A. M R.I.A.

M. R.I.A.

DESCRIPTIVE GEOMETRY, DRAWING, ENGINEERING, AND SURYEYING.—Processor PIGOT, C.E., M.R.I.A.

EXPERIMENTAL PHYSICS (THEORETICAL AND PRACTICAL).—Professor BARRETT, F. R. S. E., M. R.I.A.

MINING AND MINERALOGY.—Professor O'REILLY, C.E., M.R.I.A.

BOTANY.—Professor M'NAB, M.D., F.L.S.

ZOOLOGY.—Professor HADDON, M.A., F.Z.S.

GEOLOGY.—Professor HULL, M.A., LL.D., F.R.S., Dean of Paculty.

PALEONYOLOGY.—Mr. BALLY, F.L.S., F.G.S., M.R.I.A.

The Chemical and Physical Laboratories and Drawing School are upen daily for Practical Instruction.

Pee for Chemical Laboratory, 22 for One Month, 25 for Three Months, 29 for

The Colombia and A. 13. Annual Revenue and A. 13. The Colombia and A. 13. The Proceedings of Practical Instruction.

Fee for Chemical Laboratory, £2 for One Month, £5 for Three Months, £3 for Six Months, or £12 for Session. Fee for Physical Laboratory, £1 per month, or £5 for Session. Fee for Bological Laboratory, £2 for the term. Fee for Bological Laboratory, £4. For the term. Fee for Drawing School, £3 for Session, or £2 for one term.

The SESSION COMMENCES on MONDAY, October 6th.

Programmes may be obtained on application at the College; of by letter addressed to the Secretary, Royal College of Science, Stephen's Green, Dublin.

Professor J. P. O'REILLY, Secretary.

NORMAL SCHOOL OF SCIENCE AND ROYAL SCHOOL OF MINES, SOUTH KENSINGTON AND JERMYN STREET.

DRAN.—PROFESSOR T. H. HUXLEY, P.R.S.

Session, 1834-35.

From the 1st October, 1834, thi about the middle of June, 1825, the Laboratories will be open to Students in the following Sciences:—

Chemistry and Agriculture.

Physics.

Biology.

Grotogi.

Mechanics and Mechanical Drawing.

Mechanics and Mechanical Drawing.

The following Courses of Lectures will be given during the Session:—Physics, Professor Guthrie, F.R.S., 1st Oct., 1839; Principles of Agriculture, J. Wrightsey, P.R.S., sth. Oct.; Melalisity, Professor Charder Roborts, P.R.S., 5th. Oct.; Elementary, Organic, and Inorganic Chemistry, Professor E. Frankland, F.R.S., 3rd Nov.; Mising, Professor Warington Smyth, F.R.S., 10th Nov.; Astronomical Physics, P. O. Bower, Esq., 18th. Feb.; Elementary Geology, Professor Judd, P.R.S., 16th. Feb.; Zoology and Falsontology, Professor Huxley, P.R.S., 18th. Feb.; Botany, F. O. Bower, Esq., 18th. Feb.; Mechanics, Professor Judd, P.R.S., 18th. Feb.; Botany, F. O. Bower, Esq., 18th. Feb.; Mechanics, Professor Judd, P.R.S., 18th. Feb.; Botany, F. O. Bower, Esq., 18th. Feb.; Mechanics, Professor Judd, P.R.S., 18th. Feb.; Botany, F. O. Bower, Esq., 18th. Feb.; Mechanics, Professor Judd, P.R.S., 18th. Feb.; Botany, F. O. Bower, Esq., 18th. Feb. Mechanics, Professor Judd, P.R.S., 18th. Feb.; Botany, F. O. Bower, Esq., 18th. Feb. Mechanics, Professor Judd, P.R.S., 18th. Feb.; Botany, F. O. Bower, Esq., 18th. Feb. Mechanics, Professor Judd, P.R.S., 18th. Feb.; Botany, F. O. Bower, Esq., 18th. Feb. Mechanics, Professor Judd, P.R.S., 18th. Feb.; Botany, F. O. Bower, Esq., 18th. Feb.; Mechanics, Professor Judd, P.R.S., 18th. Feb.; Botany, F. O. Bower, Esq., 18th. Feb.; Mechanics, Professor Judd, P.R.S., 18th. Feb.; Botany, F. O. Bower, Esq., 18th. Feb.; Mechanics, Professor Judd, P.R.S., 18th. Feb.; Botany, F. R. B. Mechanics, Professor Judd, P.R.S., 18th. Feb.; Botany, F. R. B. Mechanics, Professor Judd, P.R.S., 18th. Feb.; Botany, F. R.

the 16th Feb. 1385.
In addition to the above, Lectures will be given in the Physical Department by Messrs. Boys, Mitchell, Hoffert, and Capt. W. de W. Abney, R.E., F.R.S.; in the Chemical Department by Drs. Hodgkinson and Percy Frankland; in the Biological Department by Mr. G. Howes.
For forther particulars apply to the Registrar, Normal School of Science, fouth Kensington.

#### SCHOOL. MINING

BOARD OF GOVERNORS-THE COLSTON TRUSTEES.

The NEXT SESSION BEGINS on the 1st OCTOBER, 1884. The full Course of Instruction extends over two years; but Students are received who wish to finish their studies at the end of their first Session.

The work of the School affords an effective preparation for the Mine Manager's Certificate. One day per week is spent in the Field or Mine, and considerable time is devoted to the Piotting of Surveys and the Drawing and Study of Mine Machinery.

fachinery.

There is a Chemical Laboratory, which is open daily for the general public, as ell as for Mining Students.

There is also in the same institution, but distinct from it, a School of Applied clence for Boys, intended as a preparation for the Mining School or Laboratory. Exhibitions to the value of £100 a year are given from this School to Pupils receding to a higher school, and can be held in the Mining School or Laboratory.

tory.
For Prospectuses and further information, apply to Gaongu H. Pors, Merchant's Hall, Bristof, who will enter Fuplis and receive fees.
Scholars of the Applied Science School can board in the house of one of the Masters, and other Boarding Houses may be heard of at the Hall.

DEPRESSION LET ALL STEAM USERS COVER THEIR BOILERS AND STEAM PIPES WITH

TANNIC CEMENT, And save 15 per cent, to 75 per cent. (according to situation of boiler and length of pipes) of their expenditure on Fuel.

For prices and full particulars of this New Patent Non-conducting

Composition, write to the Manufacturers, DAVID BURNS AND CO., Engineers, 10, BANK STREET, CARLISLE.

AGENTS WANTED TO LANDED PROPRIETORS, ESTATE AGENTS, SOLICITOES, AND OTHERS.

SURVEYS and PLANS of ESTATES, large or small, made at a fixed charge of One Shilling per acre anywhere in the kingdom. Address, T. G. Alderson, Land Surveyor, 10, Queen's Grove,

A GENTS WANTED TO PUSH FIRST-CLASS MACHINERY OILS commanding a large and successful sale. Liberal

Address, " Box 201," Post Office, Liverpool.

INVESTMENT IN FREEHOLD GRAZING LANDS, GROUND RIP.

IMPORTANT TO TRUSTEES AND CAPITALISTS DESIROUS OF ORM ING A PERFECTLY SECURE EMPLOYMENT FOR THEIR FURN ING A PERFECTLY SECURE EMPLOYMENT FOR THER FUND.

LANCASHIRE.—A very valuable Freshold Estate, state at Althan, is diately adjacent to the important town of accrimoton, where there is tion momenting all the main northern lines of railway. The property, it of itself an estire parish, consists of an ancient minor, containing the property of the prope

Invested.

M ESSRS. WALTON AND LRE will OFFER the ARM
for SALE by AUCTION (first as a schole, and, if not sold intal manhen in numerous lots) at the Mire Hotel, Cathedral Yard, Manchard, TUESDAY, Oct. 21, 1284, at Four o'clock in the afternoon (unless as accept offer by private treaty be previously made.
Particular, plans, and conditions of sile are in course of preparation, intentity be obtained of John Pawcker, Esq., solicitor, Otley, York: Rtl
W. HALLAM, Esq., solicitor, Coine, Laneasine: Massrs. MacDakon and J. Hirosox, mining engineers, 18. Booth Street, Mosley Street, Manchard or of the Afictioneers, at their offices, 20, Mount Street, Manchard London, W.

### IMPORTANT TO MINE OWNERS.

FOR SALE, a PLANT of ROCK-DRILLING MACHINE

quite new, comprising—
ONE AIR-COMPRESSING ENGINE, with 12 inch cylinia 3 and 31 in. tock drills, stretcher bars, &c., &c. Our Machina is been driving levels in hard rock 3 to 4 fathoms per week form

Address,-WARSOP AND HILL, NOTTINGHAM

PIT SINKING, WINDING COAL, PUMPING, &c. PORTABLE STEAM ENGINE FOR SALE, with two 9 independence of cylinders, and link motion reversing gear also gear to an nd pump. A 9 n.p. VERTICAL STEAM ENGINE, with link motion term

gear (winding drum if required).

A 6 ft. pan MORTAR MILL, VERTICAL ENGINE, and BOILD combined, on carriage and travelling wheels.

Apply to-BARROWS AND STEWART, ENGINEERS, BANBURY.

MICA.

FOR SALE OR LEASE, on favourable terms, 6000 Mg MINES, partially developed, in Wyoming Territory. Address, A. C. HENDRICKSON, 636, St. Mark's Avenue, Brokin, New York, U.S.A

MICHELL AND TREGONING'S PATENT PULVERISE PARETLE AND CO., of BASSET FOUNDRY, CARN BELL have much pleasure in announcing that they have become in PURCHASERS of an UNDIVIDED MOIETY of the ABUT PATENT; and are, therefore, in a position to SUPPLY this FIRST CLASS PULYERISER direct from their own Works at the shorm

notice, and of guaranteed workmanship.
This Pulveriser has won several Medals, and has an unrivalled at

increasing reputation for durability, cheapness, and dispatch.
Further particulars on application.
All descriptions of Mining Machinery for home and foreign pri
Faggotting, Smithery, and Fitting in all its Branches

40 HORSE-POWER NOMINAL SEMI-PORTABLE ENGIN and BOILER combined, 14 in. cylinders, 20 in. strek, vii reversing motion, pump, and injector, working pressure 19 h; new in stock. Price, £625.

Address, THOMAS PROKETT, Atlas Engine Works, Bristol.

COCOMOTIVE TANK ENGINE FOR SALE or Hill-(Second Hand). Cylinders, 12 in. diam., 18 in. stroke, for wheels coupled. Photograph on application. New Locomotive

Address, THOMAS PECKETT, late Fox, Walker, and Co., Miss Engine Works, Bristol.

FOR SALE, at BRENDON HILLS MINES:

9 feet, with fly wines, winding gear attached, with one 12 ton boiler.

Also ONE 25 inch cylinder PUMPING and WINDING ENGINE, stolet in by 7, with fly winest, winding gear attached, with one 10 ton boiler fitted will Galloway tubes.

LADYWELL MINE, SHELVE, SHROPSHIRE THE WHOLE of the Valuable MACHINERY and PLANI d this mine, comprising PUMPING, DRAWING, and CROSSING ENGINES, and all the other Machinery and Plant hers, will be OFFERED FOR SALE at the Mine on the 24th ist.

by Mr. E. H. MORRIS.
Catalogues may be obtained from the Auctioners, Chelon Salop; or H. L. NEWILL, Esq., Solicitor, Bishop's Castle. Sept. 5th, 1884.

TO CAPITALISTS AND PROMOTERS OF COMPANIE FOR SALE, on easy terms, a VALUABLE TIN and COPPEL
MINE in one of the best districts in Cornwall.

For particulars address, "Engineer," Parker's Hotel, Surrey and, W.C.

OR SALE:
TWO GOOD WINDING ENGINES, each with cylinder 15% in the company of the stroke, with drump, brake, and reversing genr.
E ditto, with cylinder 2016 in diameter, Tt. stroke, with by whelst overing goar.
ONE ditto, with cylinder 15 in. diameter, 20 in. stroke versing coar.
TWO BEAM CONDENSING ENGINES, each with sylinder it is, diand it, stroke, nozzles, side pipes, and double beat valves.
ONE STEAM SHEARING MACHINE, with cylinder 8 in, diameter, i croke, to cut bars up to 2 in x2 in, at 20 atrokes per minute.

Also a large quantity of PIPES and other COLLIERY MATERIAL.

For further particulars and to view, another

THE COALBROOKDALE COMPANY (LIMITED),

R. P. S. HAMILTON (late Chief Commissioner of Minels the Province of Nova Scotia), PRACTICAL GEOLOGIST, MINING ENGINEER, HALIFAX, NOVA SCOTIA. PURCHASES and SALES of MINING PROPERTY effected, with cards and to the interests of effects.

MONEY LENT, at HIGHT, NINE, and TEN PER CENT. STOCKING, said freeholds in the Province of MANITOBA.

Address, HERBERT C. JONES, Bolleitor, 20, Masonic Hall. Toronto

PHILLIPS MONTHLY MACHINERY REGISTER-

PURCHASE OR SALE

NEW OR SECONDHAND MACHINERY.

Bullicription, 4s. per annum, post free.

PUBLISHER AND PROPRIETOR, CHARLES D. PHILLIPS, NEWPORT MON. ACHINE

G. &c. two 94 ini fear to visi

URY OOD MICE

ERISER

RN BEEL

his FIRST

valled ad

eign puts hes.

ENGIN

tol

HIRE-

troke, for motives is

NIES.

NOBEL'S DYNAMITE

Manufactured and sold by NOBEL'S EXPLOSIVES COMPANY. LIMITED (FORMERLY THE BRITISH DYNAMITE COMPANY LIMITED),

Head Office: 149, West George Street, Glasgow.

EXPORT AGENTS: JAMES THORNE AND CO., 85, GRACECHURCH STREET, LONDON, E.C.
FACTORIES—ARDEER WORKS, STEVENSTON, AYRSHIRE.
WESTQUARTER WORKS, POLMONT STATION, STIRLINGSHIRE.
REDDING MOOR WORKS, POLMONT STATION, STIRLINGSHIRE;

TONITE, OR

IS RECOMMENDED TO CONTRACTORS, MINERS, PIT SINKERS, QUARRYMEN, AND OTHERS, AS BEING
THE SAFEST, CHEAPEST, AND STRONGEST OF ALL EXPLOSIVES
TONITE is the most efficient and economical blasting agent ever invented, and is largely in demand. It does not contain any sitto-glycerine, and is, therefore, exempt from the dangers of exudation, or of freezing and its attendant process of thawing.

The Company manufacture

PATENT
DETONATORS

of a quality much superior to the foreign article. Also supply Safety Fuse and Electric Firing Appliances of best description.

The trade supplied on favourable terms.

23, QUEEN ANNE'S GATE, LONDON, S.W. WORKS: FAVERSHAM, KENT.

ents: Dineen and Co., Leeds; David Burns, Haltwhistle; R. J. Cunnack, Helston, Cornwall; J. and W. Smith, Chapel-en-le-Frith; W. Veitch, Jedburgh, N.B. W. Harrison, Barrow-in-Furness; W. J. Parry, Bangor; Hunter and Fotheringham, Glasgow.



OF THE GREATEST STRENGTH ALLOWED BY THE EXPLOSIVES ACT.

OFFICES .-

1, Coleman Street Buildings, Moorgate Street, London, E.C. LONDON AGENT, -E. KRAFTMEIER & CO., 5, GREAT WINCHESTER STREET BUILDINGS, LONDON, E.C.

NOBEL'S DYNAMITE.



MANUFACTURED AND SOLD BY THE

DYNAMIT-ACTIEN-GESELLSCHAFT VORMALS ALFRED NOBEL & CO., HAMBURG.

Formerly ALFRED NOBEL & CO. Factories { KRÜMMEL AND SCHLEBUSCH, IN GERMANY. ZAMKY AND PRESBURG, IN AUSTRIA HUNGARY.

LONDON OFFICE: 42, BASINGHALL STREET, E.C.

EXPORT AGENTS.

WILLIAM JACKS, GLASGOW, 7, ROYAL BANK PLACE. THOMAS POOLE, LIVERPOOL, 25, WATER STREET.

DISTRICT AGENTS.

THE KENNALL GUNPOWDER COMPANY, KENNALL VALE, PENRYN CORNWALL.
FRANCIS WILLIAM HAGGIE, GATESHEAD-ON-TYNE, DURHAM.
E. M. OWEN, FESTINIOG, NORTH WALES.
W. V. REES AND CO., PONTYPRIDD, SOUTH WALES.
E. BARNES, ULVERSTON, LANCASHIRE.

SILVER MEDAL (HIGHEST AWARD) MELBOURNE, 1881

TUBES

JOHN SPENCER,

Globe Tube Works, WEDNESBURY,
AND 3, QUEEN STREET PLACE, CANNON STREET, LONDON, E.C.
FIRST PRIZE, SYDNEY, 1880.
TUBES AND FITTINGS for Gas, Siceam, and Water; Galvaniaed, Enamelled, and Hydraulic Tubes; Boller
Tubes and Fittings; Gas Fitters Tools; Brass Cocks, &c.
ANTI CORRODO TUBES AND FITTINGS COATED BY BARFF'S RUSTLESS PROCESS



Model exhibited by

HARVEY AND CO. (LIMITED)

ENGINEERS AND GENERAL MERCHANTS HAYLE, CORNWALL.

LONDON OFFICE.—186, GRESHAM HOUSE, E.C.

MANUFACTURERS OF

PUMPING and other LAND ENGINES and MARINE STEAM ENGINES
of the largest and most approved kinds in use, SUGAR MACHINERY,

MILLWORK, MINING MACHINERY, and MACHINERY IN GENERAL.

SHIPBUILDERS IN WOOD AND

MANUFACTURERS OF

HUSBAND'S PATENT PNEUMATIC STAMP

SECOND-HAND MINING MACHINERY FOR SALE
IN GOOD CONDITION, AT MODERATE PRICES—vis.

PUMPING ENGINES; WINDING ENGINES; STAMPING ENGINES,
STEAM CAPSTANS; ORE ORUSHERS; BOILERS and PITWORK of
various sizes and descriptions: and all kinds of MATERIALS required for
MINING PURPOSES



PACIFIC IRON WORKS
RANKIN, BRAYTON, AND CO., For Copper and Argentiferous Galena Ores. GENERAL OFFICE AND WORKS, San Francisco, Cal., U.S.A.

BRANCH WORKS,-CHICAGO, ILLINOIS, U.S.A.

BRANCH WORKS,—CHICAGO, ILLINOIS, U.S.A.

The Pacific Water Jacket Smelters embrace many features that are entirely new and of great practical utility, which are secured by letters patent.

No other furnaces can compare with these for durability, and in capacity for continuous and interrupted work.

More than One Hundred

of them are now running in the various mining districts of the United States, giving results never before obtained as regards continuous running, economy of fuel grade and quality of bullion produced.

produced.

These Smelters are shipped in a complete state, requiring no brick or stone work, thus saving great expense and loss of time in construction.

construction.

Complete smelting plants made to order, with all the improvements that experience has proved valuable in this class of machinery. Skilled and experienced smelters furnished when desired to examine mines and to superintend constructing and running of furnaces Estimates given upon application. Send for circular.

We refer to A. S. CHURCH, Esq., 118, LEADENHALL STREET, R. LONDON.

E.C., LONDON.

THE

BEST METAL FOR BUSHES BEARINGS

SLIDE VALVES And other wearing parts of Machine PUMPS, PLUNGERS,

CYLINDERS, &c. PHOSPHOR BRONZE

WIRE, TUBES

STEAM

PHOSPHOR BRONZE COMPANY, LIMITED,

SUMNER STREET, SOUTHWARK, LONDON, S.E.

WILLIAM BENNETTS. PATENT MINERS'



SAFETY FUSE MANUFACTURER.



NUFACTURERS!

This manufacture embraces all the latest improvements for use in Blasting in Mines, Quarries, or for Submarine Purposes; and is adapted for exploding Gunpowder, Dynamite, or any other Explosive; and is made suitable for exportation to any part of the world Price Lists and Sample Cards on application.

All communications to be addressed-ROSKEAR FUSE WORKS, CAMBORNE CORNWALL.

## BERGEN PORT SPELTER.

We are the exclusive owners of All the Mines producing the famous LEHIGH ZINC ORES of the Lehigh Valley Penn., which are the Purest in the World, making a Soft, Ductile Spelter, Free of Lead and Arsenic, superior in all respects to any other made, and especially adapted for the manufacture of

Cartridge Metal, German Silver, Castings, AND ELECTRICAL PURPOSES

BERGEN PORT ZINC CO. E. A. FISHER, Agent, 21, STATE STREET, Opposite Battery Park, NEW YORK.

		10,
THE MINING SHARE LIST.	NON-DIVIDEND BRITISH MINES.  Shares. Prid. Last wk. Ciss. pr. 110. 0. 0. 0. 110. 0. 110. 0. 110. 0. 110. 0. 0. 0. 110. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0	NON-DIVIDEND MINES—conti
A Control of the Cont	25000 Aberduna,* i, Denbigh	Sarsts
Shares   Park   DIVIDEND MINES   Shares   Park   Last pd	3200 Blue Hills t, c, St. Agness	\$000 Northern, * !, Durham
4000 Craignant Bach,* (, Cardigan	20000 Bwich United, f. Cardigan	40000 Okel Tor," t, c, a, Calstook
5400 East Pool, t, c, Illogan 0 9 9 42 40 41 40 15 5 10 0 Aug. 1884 12000 Great Holway, I, Flintshire 5 0 0 9 10 10 10 0 7 6 Sept. 1883 15000 Great Lawy, Leleo (Mantt. 6 0 10 0 10 0 10 0 10 0 7 6 Sept. 1883	50000 Carn Camborne, *c, c, Camborne 1 0 0 34 16 3/ 37500 Carnarvonshire Cons., *c, Lianrwst. 2 0 0 36 1/ 8400 Cashwell, *c, Comborland 1 2 19 0 136 1 14	7500 Parys Corporation, c, Anglesea 1 0 6. 7500 Pateley Bridge, f, Yorkshire 1 0 6. 6000 Pedn-an-drea, f, Redruth
\$400 Green Hurth, t, Durham* 0 8 0 4½ 4 4½ 4 15 0 0 5 0 July 1824  9830 Gunnislake (Clitters), t, c 2 2 0 2½ ½ 0 19 9 0 2 0 Mar. 1822  2800 Jale of Man, Liel of Man* 25 0 0 25 0 25 0 25 0 25 0 25 0 25 0 20 0 25 0	6000 Cathedral, c, t, Gwennap 1 12 0	2000 Pennant, l, dar, North Wales 5 0 0. 20000 Penegarreg, l, Carmarthenshire 1 0 0. 1500C Pen-yr-Orsedd, l, Flintshire 1 0
8000 Killifreth, 6 Chacewates 4 8 8 34 34 34 014 6 02 0 Nov. 1883 2000 Leadhills, 4 Lanarkshire 5 0 0 114 134 134 1 5 6 0 3 8 80 1883 400 Lieburne, 5 Oardiganshire 5 15 15 0 0 0 10 0 10 0 0 10 0 0 10 0 0 10 0 0 10 0 0 10 0 0 10 0 0 10 0 0 10 0 0 10 0 0 0 10 0 0 0 10 0 0 0 10 0 0 0 10 0 0 0 10 0 0 0 0 0 0 0 0 0 0 0 0 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	12000 Collacombe Consols, c, bl, Lamerton 0 2 5	45000 Parys Corporation, *c, Anglosea 1 0 1 7500 Pateley Bridge, *t, Yorkshire 1 0 1 7500 Parely Parely *t, Pintshire 1 0 1 7500 Parely Propagate, *t, Pintshire 1 0 1 7500 Parely Pateley *t, Parely Propagate, *t, Pintshire 1 0 1 7500 Parely Pateley *t, Parely Parely Propagate, *t, Pintshire 1 0 1 7500 Parely Pateley *t, Pateley
10000 Mellanear, c. Hayle	50000 Davon Friendship To are Tawletook 1 6 5 5 5 5 5	30000 Euseni United. C. Taviatoek
11829 North Hendre, t, Wales	12000 Devon Great United (21, shares) 1 17 6 34 35 35 35 35 36 36 37	30000 Silver Hill, Callington 1 0 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
12000 Roman Gravels, talop 7 10 0 34 3 35 911 0 5 0 May 1883 6123 Bouth Condurrow, t.c., Cambornet 7 5 7 94 8 4 9 11 8 6 0 7 0 Aug. 1884 8000 Bouth Parren, t. Cardigan 16 2 2 2 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2	12000 East Blue Hills, 5, St. Agnes 0 5 0 6s. 4s. 6s. 6000 East Botallack, 5, St. Just 1 2 6 56 56 56	40000 Sortridge, *c, Horrabridge
15000 Van, Liandidoes (is. iq.) 4 5 0 1½, 1½, 1½, 1½ 13 0 0 2 6Jan, 1883 6000 West Basset, c, Illogants 7 10 4 3 3½, 3 28 3 8 0 6 8Apr. 1882	12000 East Bute Hills, f. St. Agnes 0 5 0. 6s. 4s. 6s. 6000 East Botallack, f. St. Just 1 2 6. 36 36 36 36 36 36 36 36 36 36 36 36 36	\$000 So. Devon Unit., c, Buckfastleigh. 1 0 0 \$000 South Dolcoath, c, t, Illogan
8000 Wheal Agar, f. Illogan 19 8 0 16% 16% 1616 0 0 10 0 June 1834 12000 Wheal Orebor, c. Tavistock 2 4 0 1% 1% 1% 1 1 3 0 2 6 Nov. 1883		
8000 Wheal Greaville, f. Camborne 15 0 0 8½ 6 6½ 2 0 0 0 2 6June 1824 1 4295 Wheal Kitty, f. St. Agnes 6 51 0 56 ½ 56 12 18 6 0 1 6Jan 1831 3000 Wheal Peavor, f. Redrubb 13 13 6 ½ ½ 6 8 13 6 0 9 0 Mar. 1831	25000 Ecton,* c, Wetton 1 0 0 1%	30000 Standard, I. bl., Llanrwst
FOREIGN DIVIDEND MINES.	12500 Frongooh, I, Cardgn (11000 sh.iss.) 2 0 0 34 34 34 12000 Gawton, c, Tavistock	40000 Tamar, z-i, Bearaiston*
25500 Alamillos, I, Bpain*†	10000 Goddards, * I, o, Carnaryon	8000 Tresavean, t, c, Gwennap
20000 Australian, c, South Australia 7 7 6 2 116 2 111 0 0 1 6 July 1884 1 15000 Birdeye Oreek, g, California 4 0 0 36 36 36 1 7 0 0 2 0 June 1884 30000 Bratsberg, c, Norway 1 2 0 0 134 1 14 3 4 436 0 1 23 Mar. 1884		1000 Vaughan, * i, Cardiganshire
20000 Cape Copper Mining, *1 South Africa 8 0 0 45 43 5 57 17 6 1 10 Aug. 1883 2 5000 Colorado United, *-1 Colorado*1 5 0 0 24 14 2 3 14 8 0 1 0 May 1883 1 5000 Colorado United, *-1 Colorado*1 5 0 0 24 14 2 3 14 8 0 1 0 May 1883 1	0000 Great w. Snepheras c. Cornwall 1 0 2 0 2 0 0	12000 West Caradon, c, St. Cleer
70000 English & Australian, 7c, 8. Aust 2 10 0 — 3 2 9 0 1 0 Mar. 1884 2000 Eng-Aus., g, Vict. prof. (20000 o.) 1 0 0 — 0 3 8 0 3 8 Apr. 1882 25000 Fortuna, 6. Banin't 2 0 0 3 3 4 28 34 81 5 0 3 8 Apr. 1882	8400 Hardshins,* l, Westmore (10s. sh.) 0 2 5 10 36 3/18 2000 Herodsfoot, l, near Liskeard† 1 6 0 36 3/18 2000 Hingston Down, c, Calstock*† 0 13 0 3/18 3/18 3/18 3/18 3/18 3/18 3/18 3/18	12000 West Crebor, c, Tavistock
72000 Frontino & Bolivia, g, New Gran.*) 2 0 0 74 74 74 3 12 0 0 1 0 Dec. 1883 3 400000 La Plata, s-l, Leadville* 1 0 0 571 376 74 0 6 6 0 0 776 Oct. 1882 5000 Linares, l, Spain*† 3 0 0 35 234 354 19 10 4 0 3 0 Mar. 1884 23	8000 Hingston Down, c, Calatock* 1 0 13 0 36 32 5000 Holway Consols, *f. Flintshifte 1 0 0 55 32 5000 Kit Hill Gt. Cons. *c, ars-m, (2l. sh.) 1 2 8 36 36 36	12000 West Gonamena, c. St. Cleer 0 1 0
20000 Marbella Iron Ore, ". Spain 10 0 0 2½ 2 2½ 010 0 010 0 June 1882 11 185164 Mason & Barry" c, Portugal 10 0 0 10¾ 10¼ 10½ 3 15 0 015 0 Apr. 1884 13 10000 Montans, g.s., U.S.A 2 0 0 1¾ 1¾ 1¾ 0 0 8 0 8 8 Sept. 1884	5000 Lady Ann, * s-l, Llanarmon	3000 West Mary Ann, l, Menheniot 1 18 0 20020 W. Pateley Bridge, l, Yorkshire 1 0 0 12000 West Phonix, t, Linkinhorne 1 5 0
2009 Pitangui, g, Brazil (in. 6000 £1 pd). 0 10 0 3 15 3 15 per cent 1882 2 5000 Pitangui, g, Brazil (in. 6000 £1 pd). 0 10 0 0 1 0 0 1 0 5 per cent 1882 2 5000 Pitangui, g, Brazil (in. 6000 £1 pd). 0 10 0 0 1 0 0 1 0 5 per cent.	9000 Marke Valley, c, Linkinhornel 7 14 8 34 34 35 36 36 36 36 36 36 36 36 36 36 36 36 36	12000   Weardate, *, Norfaumber, (4, share)   5   6, 12000   Weardate, *, Norfaumber, (4, share)   1   5   6, 12000   Weat Carasdon, ¢, St. Cleer   0.10   2, 12000   Weat Carasdon, ¢, St. Cleer   0.10   2, 12000   Weat Carasdon, *, Contact Carasdon, *, Contac
100000 Port Phillip, G. Clunes* (£2 shares) 1 0 0 \$ 6 \$ 30 3 1 0 11 3 Dec. 1883 20 100000 Port Phillip, G. Clunes* (£2 shares) 1 0 0 \$ 4 14 \$ 14 2 0 10 Theb. 1881 20 50000 Rars Fortuna, s, Argent. Republic. 1 0 0 3 3 0 0 1 0 July 1882 12 54000 Rhomond Character at the control of the contro	100 Mona, c, Anglesea	2400 West Wheal Seton, c, Cambornel
24532 Rio Tinto, c, Mortgage Bds., Huelva.100 C 0.102 100 102 5 per cent Apr. 1334 6 32500 Ditto, shares	114 Mount Carbis, t.c. Redruth 150	3000 Wheal Boys, t, Bedruth
120000 Schwabz Gully, 6, Kimberley 10 0 0 856 8 616 8 2 8 0 10 0 June 1884   2 20000 Scottish-Australian Mining Co.** 1 0 0 256 236 236 239 20 p. cent. 0 2 0 Apr. 1834   80000 Ditto, New	400 New Cook's Kitchen, f. Illogan 10 5 8 116 1 117 000 New Bolcoath, f. c, Camborne 3 0 0 000 New Holmbush, f. t, c, Callington 3 0 0	3000 West Wheal Feevor, i, Redruth
FOREIGN DIVIDEND MINES.	1000 New Caradon, c, St. Cleer	2000 Wheal Jewell, c, St. Hilary 1 6 5 2000 Wheal Lusky, t, Callington 0 3 8 2000 Wheal Owles, t, St. Just. 7 3 6 2000 Wh. Sliver & Lanteglos, *s-t, Cameric 1 0 6 8000 Wheal Bisters, t, Lelant
14000 Tolima,*g, s, Colombia (A shares)	500 New Tincroft,* s, Leiant	8000 Wheal Bisters, f, Lelant 4 2 6 4 4098 Wheal Uny, f, c, Redruth 20 7 0 1856 Wye Valley, l, Montgomery. 1 0 1
25000 Victoria* (London), g, Australia 1 0 0 3 0 13 10 0 0 8 Feb. 1851 124221 United Mexican, *  1; Mexico 9 17 6 3½ 3½ 3½ 0 2 6 0 2 6 May 1854 30 100000 Victorine (Newada, U.S.) Deb. Bds. 1 0 0 - 0 2 0 0 0 6 June 1882 124	000 New West Caradon, c. Liskeard 0 7 8 34 34 34 000 New Wheal Peevor, t. Redruth 0 10 0 4 50 000 North Blue Hills, c. St. Agnes 0 2 8 1/8 1.8.1s.6d.	0000 Yeoland Consols, t, Devonshire 0 12 4
6000 Disto (B shares)	328 North Busy, f, c, Scorrier   2 4 8 28 18. 28.   000 N. D'Eresby Mount., l, bl, Carnary. 1 0   000 North Goginar. l, Cardiganshire. 1 0 0	bi, blende; c, copper; g, gold; i, lead; s, silva; d
Have made calls since last dividend was paid.     250	000 North Grogwinion, s-i, Cardigshr. 1 0 0 36 3 36	imited Liability Companies; † quoted on the Steel I have paid dividends.
NON-DIVIDEND FOREIGN MINES; FOREIGN	AND MISCELLANEOUS STOCKS;	TRAMWAYS; INSURANC
COMPANIES; GAS, IRON AND COAL,	, FINANCIAL AND INVESTMENT	COMPANIES, &c.
NON-DIVIDEND FOREIGN MINES.  FINANCIAL AND INVESTMEN Parts.  Parts. Pl. Shares.	Clos. pr. Shares Commany This p	Isone, Shares, GAS COMPANIES.
00000 Akankoo, g, Gold Cet. (100000 iss.) 1 0 0 5/18 1/18 20000 25 Australian Agricultural	2½ 2½ 100 Abbot, John, and Go. 75 5 43 45 104 112 100 Abbury Co. [L] (new) 90 0 25½ 26½ 109 100 2 Hagnall, John, and Sons [L] 3 0	5990. By Bahla [L]
2000 Arendal, c, Norway	17% 18% 10 B mhar Coal Co. (L) 100 10 0 10 0 10 10 10 10 10 10 10 10 10 10 10 10 10	50000 Stk Commercial County Meter
3000 Belt,* c, Lake Sup., (22000 £4 paid) 5 0 0   582000 Btk Do., do. 4 per cent. Deb. Stock100   0000 British Australian,* g, N. So. Wales 1 0 0   283425 10 Canada Company   1   283425 10 Canada North West Land Co. [L] 5   1   1   1   1   1   1   1   1   1	102 104 94 96 20 Bolekow, Yaughan, & Co. (EJ. A 12 0 83/2 9) 25/2 25/2 25/2 100 Brown, Bailey, and Dixon (L) 40 0 80 82/3 2 11 14 100 Cammell and Co. (L) 80 0 75 775/2	20000 20Continental Union (L) Orig at. 20000 20 Do. do. New, 1869, 1872 is. 10000 20 Do. do. 7 per ct. Preferenceal. 23406 10. European (L)
0000 Caliao Bis, "g, Venezueia   1 0 0	1 14 100 Cammell and Co. [L] 80 0 75 77% 119 124 20 Cannock & Huntington Coal[L] 10 0 10% 10 119 124 10 Central Swedish from & Sti. [L] 10 0 10% 10 3% 3% 50 Charton Iron Co. [L] 50 0 1 1 1% 10 Chillington Iron Co. [L] 10 0 3/2 3/2	23408 10. European [L] all. dis 94850 81k Gaslight and Coke, A., Ord 39. 284200 81k Do. 4 per cent. Deb. 80st 40. 5000 10. Hong Kong and Ohina 41. 2809000 81k Inperial Continentsia 39. 120900 5 Malta & Mediterranean [L] k.
\$000 Colombian Hydraulic, g, Colombia 1 0 0 1 5 25000 10 Land Octoporation of Canada [L]. 3 100000 Devals Moyar, g, Wynaadt	1 1% 10 Chillington Iron Co. [L]	2500900.8kkImpēriai Continentai
5000 Don Pedro North del Rey 1 0 0	235 245 50 Davy Brothers [L] 22 16	10000 5. Octoman [L] al. 30000 5. Oriental [L] al. 27500 20. Rio de Janeiro [L] al. 500000stkSouth Metropolitan, 4
5168 Eberhardt, s, Nevada*†	Ad Wasselva As Assessment & Co.	50000 Stk South Metropolitan, A
0000 Georgia, g, United States	50 Knowles, Andrew, and Oo. [L] 25 0 7 7% 20 Llynvi and Tondu [L]	TRAMWAYS.
0000 Hoover Hill, *g, North Carolina 1 0 0 1/4 1/200 Hultafail, * l, Ot, Orebro, Sweden . 5 0 0  INSURANCE COMPANIES.  1000 Indian Consolidated, *g	10 Midland Iron Co. (L)	/sous. SAarss. 40000 5Anglo-Argentine [L]
1000 I.X.L., g, s, California	20 22 3 Nerbudda Coal and Iron [L] 236 136 2	1000 10 Ditto, 6 per cent. Preference
000 Kananga, c. New Zealand 1 C S 14 34 5000 10 Globe Waring (73	100 Parkgate Iron Co. [L]	9296. 16Bristol [L] 25000 10Bordeaux Tram & Omnibus [L]. a 25050 10Calcutta [L].
000 Liston-Berivn.* g. South Africa 1 0 0 36 16 100000 10 Lion Fire [L]	14 15 30 Pelsail Coal and Iron [L] 20 0 25 23 16 16 36 36 36 37 38 38 38	3200 10Chester [L]
000 London and California, g*1]     2 0 0     3828 25 London and Globe (£1 aunty) 2       000 Michipkoten, * ast. c, Quebec     1 0 0     40000 25 London and Lancashire Fire 236       000 Mysore, * g, Indiat     1 0 0     50000 20 London and Provincial Marine (£) 2       000 New Callao, * g, Venezuela	10 Sandwell Park Colliery Co. (L) 10 0 144 444 100 Shotts Iron Co. (L) 10 0 0 2254 35 4 445 25 Sheepbridge Iron and Cosi (L) 22 0 9½ 10 25 35 27 35 27 35 28 35 35 35 35 35 35 35 35 35 35 35 35 35	14690 10Edinburgh Street Tramways 35000 10Glasgow Tramway & Omni. (i) 10000 10Hughes Loco and Tram. weis. 7500 10Hull Street Tramways
1   0   000 New Callao,*g, Venezuela   1   0   0   5000 10 Merchanis* Marine [L]   2   0   0   0   0   0   0   0   0   0	25% 27% 50 Silkstone & Dodw. Cl. & Iron [L] 45 8  134 14 50 Somorrostro Iron Co. [L] 50 0  254 100 Staveley Iron and Con Co. [L] 60 0 58 58%;  25 28 100 Ditto ditto B 10 0 9% 9%	7500. 10Imperial [L] 34000. 10Liverpool Unit. Tram & Om. [L] xd. 25000. 10London [L] xd. 15009. 10London Street Tramways
000 New Potosi, g, Venesuelat	41/4 81/4   50 Tradegar Iron and Coal ACT 100 A 18	80000 10North Metropolitan

NON-DIVIDEND FOREIGN MINES.	FINANCIAL AND INVESTMENT.	IRON AND COAL COMPANIES.	Jone, Shares, GAS COMPANII
Pand. 6 0000 Akankoo, g, Gold Cst. (100000 iss.) 1 0 0. 4880 Anglo-African, d, Kimberley, 1 19 0 0 2000 Arendal, c, Norway 4 0	19 19 29 2000 25 Australian Agricultural 21½ 10000 10 Aust. Mort. & Agency (L) Eng. issue 2 2 2 ½ 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	3 Bagnall, John, and Sons [L] 3 0 10 B :nhar Coal Co. [L]	510000 5 Bombay [L]
8000 Belt,* c, Lake Sup., (22000 £4 paid) 5 0 0 0000 British Australian,* g, N. So. Wales 1 0 0 0000 Buena Ventura,* l, Spain (fy.pd) 2 0 0	263425 10 Canada North West Land Co. [L] 5 2% 2 130000 1 Central Agentine Land [L] 1 2% 2	50 Brown, Bailey, and Dixon (L) 40 0	14000 Brentford Consolidated 14000 94k Commercial Consolidated 20000 20 Continental Union [L] 20000 20 Do. do. New 1885, 18 10000 20 Do. do. 7per ct. Pesse 1408 10 European [L] 94850 84k Gaslight and Coke, A, Oc 24420 94 per cent Leb 88
0000 Callao Bis, g, Venerueia	77000 5 Colon. Inv.kAg. of N. Zesland(L) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	100 Gammell and Co. [L]	2406. 10. European [L] 94850. 8kk Gaslight and Coke, A, Or 284200. 8kk Do. 4 per cent. Deb. 8b 5000. 10. Hong Kong and Ohina 2300800. 8kk Imperial Continental 12000. 5 Malta & Mediterranean [ 100000 Mesrop. of Melbournes p. 25000. 20. Monte Video [L] 10000 Octoman [L]
0000 Devals Moyar, *g, Wynaadt	<ol> <li>36 36 56 London Financial Association [L] 42 5</li></ol>	1 Consett Spanish Orc [L]	100000 Metrop. of Melbournel p. 25000 20 Monte Video [L] 10000 5 Ottoman [L]
168 Eberhardt, s, Nevada*†	1/16 3/16 200000 Stk Do. 5 p. c, Guaranteed Pref100122 117 200000 Stk Do. 6 per cent. do100130 135	23 Ebbw Vale Co. [L]	10000 5Ottoman [L] 30000 5Oriental [L]
000 Georgia, g, United States	100000 10 S, Aust. Land Mort. & Agency (L) 2 2% 23		50000Stk Ditto, ditto. B
000 Hoover Hill, g, North Carolina 1 0 0	14 M INSURANCE COMPANIES.	20 Llynvi and Tondu [L]	TRAMWAYS.
600 Indian Consolidated,*g       1 0 8         600 Ind. Glenrock,*g, Wynnadi       1 0 0         600 Iron Gate*cl.chr. Hungary       1 0 0         600 I.X.L., g, s, California*       1 0 0	1/1 1/1 Inne. Bhares. Pd. Clas. pr.	10 Midland Iron Co. (L)	40000 5 Anglo-Argentine [L] 10000 10 Barcelona [L] 7140 10 Belfast Street Tramways 3050 10 Birkenhead, Ordinary 3000 10 Ditto, 6 per cent. Prefe 50000 2 Brazilian Street Railways
100 Javali, g, Nicaragua* 2 0 0	550000 50 Commercial Union 5 1034 1736 50000 50 Eagle	10 Newport Abercarn Coal Co. (L) 10 0 9 10 35 Paimer's Shipbidg. & Iron (L) 35 0 23 ½ 24 ½	50000 2Brazilian Street Railway 9290 10Bristol [L]
000 Kapanga, s, New Zealand 1 C 0 000 Kohinoor, s, Colorado	1000   100 Aliance British and Foreign   11   37   39   1000   100 Ditto, Marine   20   20   22   22   23   25   25   25   25   25	35 Painer s Shipping, & Iron [L] 35 0 23½ 24½ 100 Parkgate Iron Co. [L] 85 0 67 67½ 20 Patent Nut and Bolt [L] 14 0 26 E5½ 50 Pearson and Knowles, R 85 0 25 23½ 20 Peisali Coal and Iron [L] 20 0 8½ 9½	50000 2 Brazilian Street Mailway 2390 10 Britstol [L] 25000 10 Bordeaux Tram & Omil 25059 10 Calcutta [L] 3200 10 Chester [L] 3200 10 Chester [L] 3200 10 Glasgow Tramway & Om 10500 10 Glasgow Tramway & Om 10000 10 HughesLoco, and Tram 7500 10 Hull Street Tramways 7500 10 Hull Street Tramways
00 Liston-Berlyn, g, South Africa 1 0 0 00 London and California, g*11 2 0 0	36 36 100000 10 Lion Fire [L]	6 Bhymney Iron Co. (L) 5 0 34 1%	24000 10 Dublin
000 Michipicoten, * nat. c, Quebec 1 C 0 000 Moselle, * l, b-l, Germany	40000 25 London and Lancashire Fire	10 Bandwell Park Collisty Co. [L] 10 0 22 13 100 Bhotta Iron Co. [L] 10 0 22 34 35 25 Bheepbridge Iron and Coal [L] 22 0 93/ 10 50 Billstone & Dodw. Cl. & Iron [L] 45 0	
00 New Callao, *g, Venezuela	50000 10 Merchants' Marine [L]. 2 3/14/ 5/4 50000 10 Maritime [L]. 3 3/4 4/5 5/4 10020 25 North British and Mercantile 8/4 25 28 5/4 10000 100 Northern. 22	50 Somorrostro Iron Co. [L] 50 6 58 58½ xd. 100 Ditto ditto B 10 0 58 58½ xd. 100 Ditto ditto B 10 0 9½ 9½ xd. 5 Teesside Iron & Engine Works 5 0 ½ ½	25000 10London L
00 Oiathe, * i, Leadville, Colorado ] 0 5 00 Ooregum, * g, Mysore ] 0 0 0 00 Oregon g, U.S. (4000 pri. sh.) 0 2 5 00 Organos, * g, Colombia 1 0 0 00 Oritá, * g, Colombia 1 0 0 00 Ocear, * g, Korway (£1) 0 10 0 20 Ouro Preto*g, Brazil 5 0 0	20000 10 Queen 1 2 2½ 10000 10 Railway Passengers 33. 7½ 8½ 1½ 10000 10 Rock Life 5 14 5000 10 Sea 5 15 5000 10 Sea	25 Ditto ditto B 25 0 17% 18 10 Vancouver Cosi [L]	15947 10
00 Pestarena United, g, Italy*† 3 0 0 00 Pierrefitte* (20000 pref.)	4000 20 Standard Marine 4	BANKS.	20000 5 Tramways and Gen. Worl
00 Exvenseliff g, N. Zind; c, S. Aust. 1 0 0 00 Rhodes Eest, g, Wynaadt	South to Universal Marine [15]	80000 20 Angle-Egyptian Banking [L] all 151/2 161/2	7200 10Wolverhampton[L]
		12500   20 Bank of Australasis   39 91   12500   20 Bank of British Columbia   31   22 \cdot 22 \cdot 23 \cdot 25   23 \cdot 36   25   23 \cdot 25   25   25   25   25   25   25   25	MISCELLANEOU Shares. Company.
0   0   0   0   0   0   0   0   0   0	34     34       34     35       34     36       35     30       31     30       31     30       31     30       31     30       31     30       31     30       31     30       31     30       31     30       31     30       31     30       31     30       31     30       31     30       31     30       31     30       31     30       31     30       31     30       32     30       31     30       32     30       31     30       31     30       31     30       31     30       32     30       33     30       34     30       35     30       36     30       37     30       31     30       31     30       32     30       33     30       34     30       35     30       36     30       37	100000 10 Bank of New Zealand	Shares, Company, 10 Anglo-American Brush
00 Transvaal, g, Bouth Africa 2 0 0	10 Cuba 10 0 10 1 11 11 11 11 11 11 11 11 11 11 11 1	40000 28 Chartrd. of Ind., Aust., & China, all 23 24 20000 25 Ch. Merc. of Ind., Lond., China, all 18 19	10 Ditto do. 50 Lon. & Glas. Engin. & Iree Ship E 1 Maxim-Weston Electric
00 Virneberg, c, Kheinbreith., Gar." 2 0 0	10 Cuba	10000 190 Cottobial	
59 Wentworth, * g, Wynaad	10 Great Northern of Copenhagen 10 0 13% 13% 25 Indo-European 25 0 21 22	60000   T London and San Francisco   L  10 13   14   15   15   16   17   18   18   18   18   18   18   18	10 Young a Paraffin Light & M.O 1
00 Wynaad Perseverance, 1 g	10 London Piatino Bratilian	1   1   2   2   2   2   2   2   2   2	London: Printed by RICHARD MIDDLE by HENRY ENGLISH (the proprieta 20, FLEET STREET, E.C., where all requested to be addressed,—Septembri